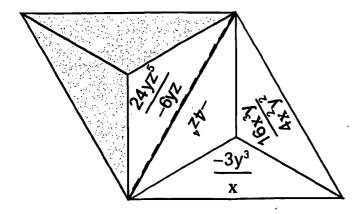
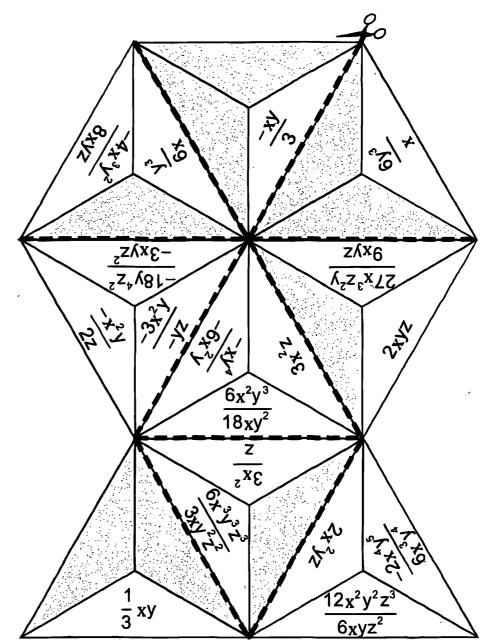
Matching Algebraic Expressions

- 1. Cut out the 9 equilateral triangles along the dotted lines.
- 2. Match the equivalent algebraic expressions:

Example:
$$\frac{24 \text{ yz}^5}{-6 \text{yz}} = \frac{24 \text{ x y x z x z x z x z x z x z}}{-6 \text{ x y x z}}$$
$$= -4z^4$$

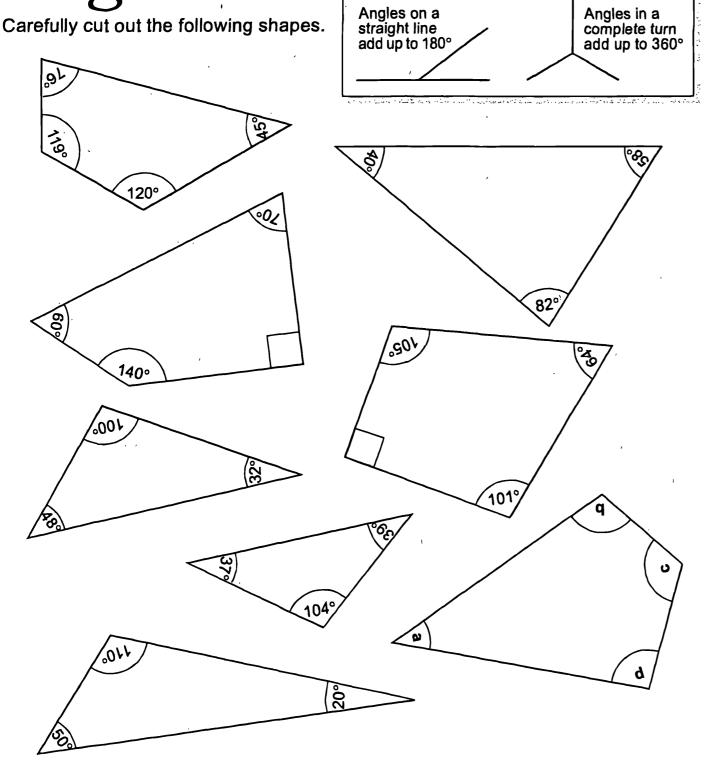


- 3. Record your working out in your book.
- 4. Fit the equilateral triangles together to make one large triangle. The shaded sections mark the edges of the triangle.



Angle Fit

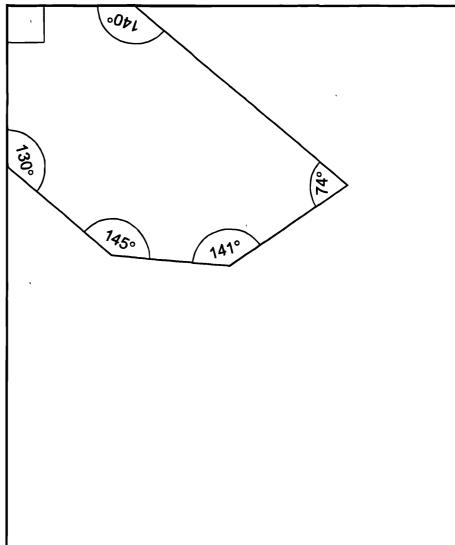
Carefully cut out the following shapes.



The following angle facts might help:

Smile Worksheet 2358

By looking at the size of the angles, fit them in this rectangle. 1.



2. Calculate angles a, b, c and d.

a =

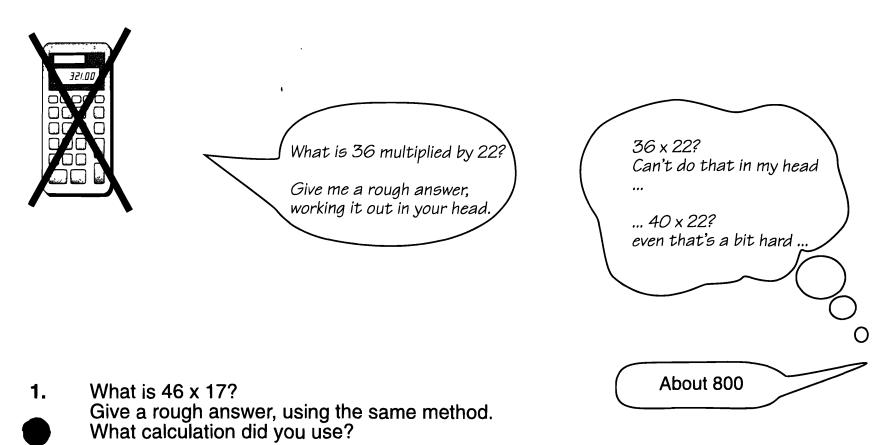
b =

c =

d =

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Approximate Solutions



2. Copy and complete this table:

calculations	rough calculations	rough answers	
583 ÷ 18	600 ÷ 20	30 _	rough
408 x 68			$\begin{pmatrix} 400 \times 600 \div 30 \\ 70 \times 600 \div 20 \end{pmatrix}$
875 ÷ 23			$80 \times 20 \begin{array}{c} 70 \times & 600 \div 20 \\ 900 \div 20 \end{array}$
79 x 22			rough
576 ÷ 27			28000 20
67 x 81			160 45

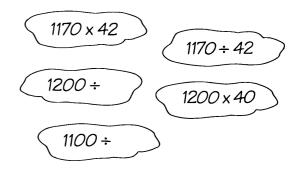
3. Choose your own rough calculations to complete this table:

calculations	rough calculations (approximations)	rough answers (approximate solutions)
71 x 88		
383 ÷ 53		
49 x 48		

4. Here is a problem ...

... and some calculations.

There are 1170 pupils in the school.
There are 42 tutor rooms.
Work out approximately, how many
pupils are in each tutor group.



- a) Which two calculations must be wrong?
- b) Which two calculations give approximate solutions to the problem?
- c) Which calculation would you use?
- 5. Copy and complete this table in your book.

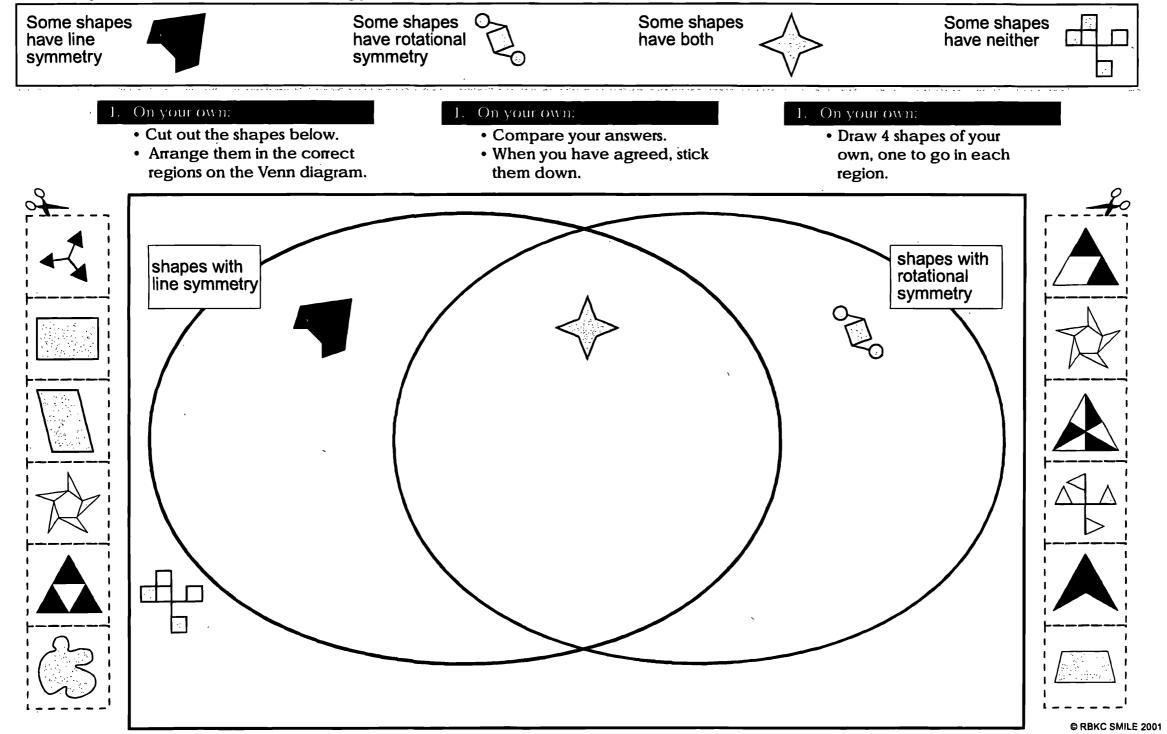
	problems	calculations	approximations	approximate solutions
a)	There are 36 eggs in a tray. A box of eggs contains 12 trays of eggs. About how many eggs are in a box?			
b)	About how many 62 seater coaches are needed to take a school of 1796 students on a trip?			
c)	A bottle of cola contains 1950ml. About how many millilitres in 11 bottles?			
d)	A bottle of cola contains 1950ml. 205ml are needed to fill a cup. About how many cups can be filled?			

- 6. A job pays £214 per week.
 About how much is this in one year (52 weeks)?
- 7. Each student needs 27 centicubes to build a larger cube. There are 29 students in the class.

 About how many centicubes are needed?
- 8. One pint of milk is sufficient for 22 cups of tea.
 About how many pints are needed for 485 cups of tea?

Rotational and line symmetry review

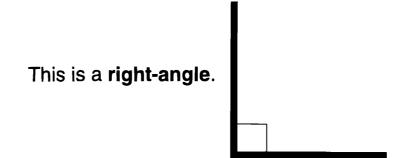
An activity for two. You will both need a copy of this worksheet.



Right-angle or not?

You will need tracing paper.

There are many **right-angles** around. For example, the corners of this card are right-angles.



- A
- 1. Trace the right-angle and place it over the top of the angles to find out which ones are right-angles.
- **2.** Copy and complete the table.

Angle	Right-angle
Α	Yes
В	No
С	
D	
Е	
F	
G	All Property of the Control of the C
Н	
J	
J K	
L	

- **3.** Draw a right-angle in your book.
- **4.** Find **5** things around your classroom that have right-angles.

Write a list of them in your book.

Check these with your teacher.

Decimal Routes

Start at Start and find your way to the End

- 1. You can only move
- left
- right

OI





- 2. You can only go into the squares when the answer is 3 or 1.5.
- 3. Shade in your route as you go along.

Start Start								
0.2 + 1.3				1.5 x 2 3	0.7 + 0.8	3÷2		1.3 x 10
15 ÷ 10	4 – 0.5	7 – 5.5	18 ÷ 5	0.5 + 1.5	1.4 x 11	4.5 – 1.5	1 ÷ 2	1 + 0.05
1.1 + 0.4	2.5 – 1	4.5 ÷ 3	0.5 + 1	10 – 8.5	16 + 10	3 x 0.5	0.5 + 0.6	1+5
1.8 ÷ 0.4	18 – 0.3	5.2 ÷ 2	6 + 3.3	0.5 x 6	7.5 ÷ 5	1.6 – 0.1	0.5 x 10	3 x 0.1
0.4 x 10	2.3 + 0.7	6.5 – 5	0.2 x 1.5	1.4 + 1.4	3 x 1.5	1 ÷ 5	5 ÷ 10	3 x 0.5
6.3 – 3	5.3 – 2	0.75 x 2	1 x 0.3	1.6 + 1.3	1.5 + 2.5	0.2 x 1.5	7 ÷ 5	0.2 ÷ 4
3 ÷ 0.5	6.5 ÷ 4	12 x 0.25	4 ÷ 3	0.1 – 1.5	3.5 – 0.1	1.3 + 1.2	6 ÷ 0.5	4-3
3.5 ÷ 2	5+4	1	i _		11.5 ÷ 10		7.1 – 3.1	7

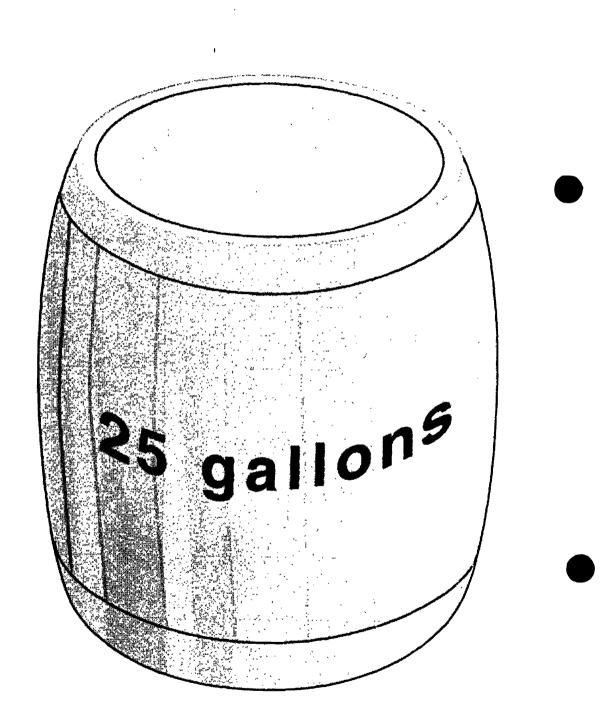
You should record any working out here.

Conversion Pack 1

An activity for 2 people

- 1. Complete the problems on cards A F. You might find the conversion chart on the back of this envelope helpful.
- 2. Record your answers in your book. Show your working. Remember to include the units in your answers.
- 3. You need to know the conversions. Record them in your book and test each other on them.





How many pints?

Match the pairs of cards.

a) 2km

1) 1350cm

b) 135cm

2) 0.265km

c) 26.5mm

3) 2000m

d) 13.5m

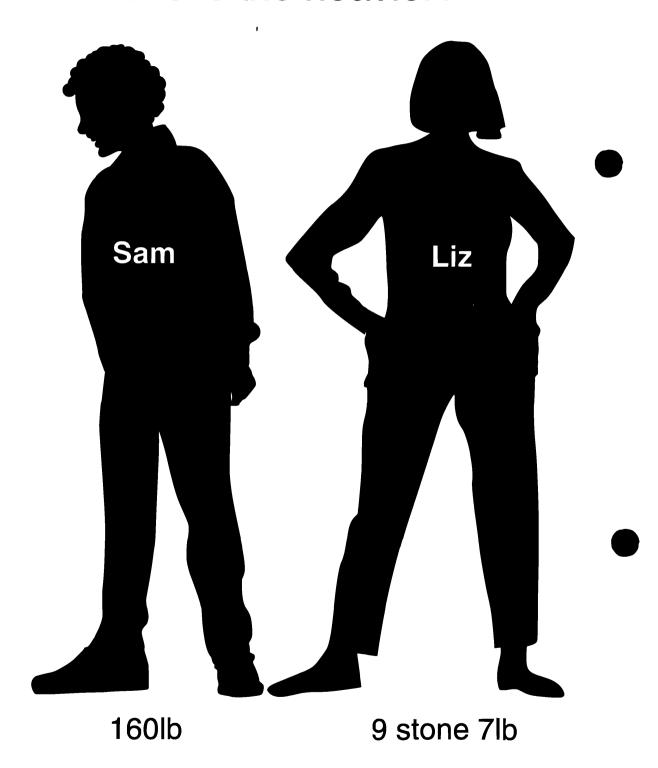
4) 1350mm

e) 265m

5) 2.65cm

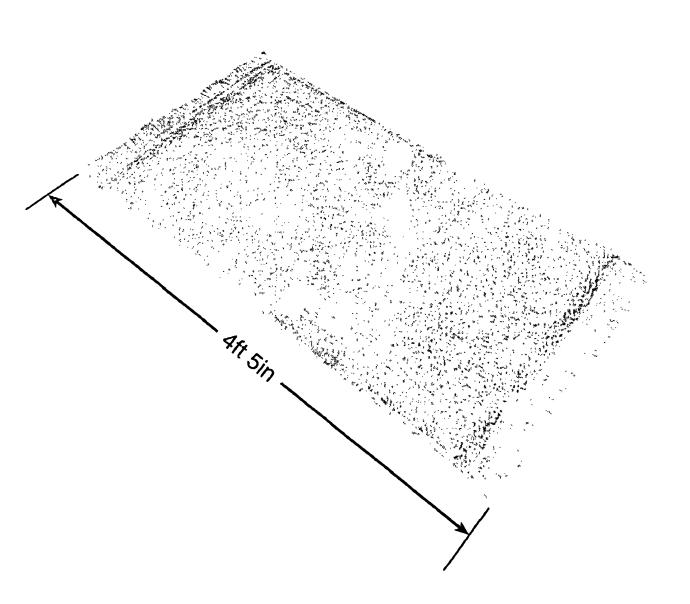


Who is the heavier?





A rug is 4 foot 5 inches long. How many inches is this?





Two students are doing a science experiment. They take 57ml 1 litre from a 1 litre measuring beaker.

How much liquid is left in the beaker?



The hand baggage allowance on the flight to Kenya is 5kg.

Tim's bag contains:



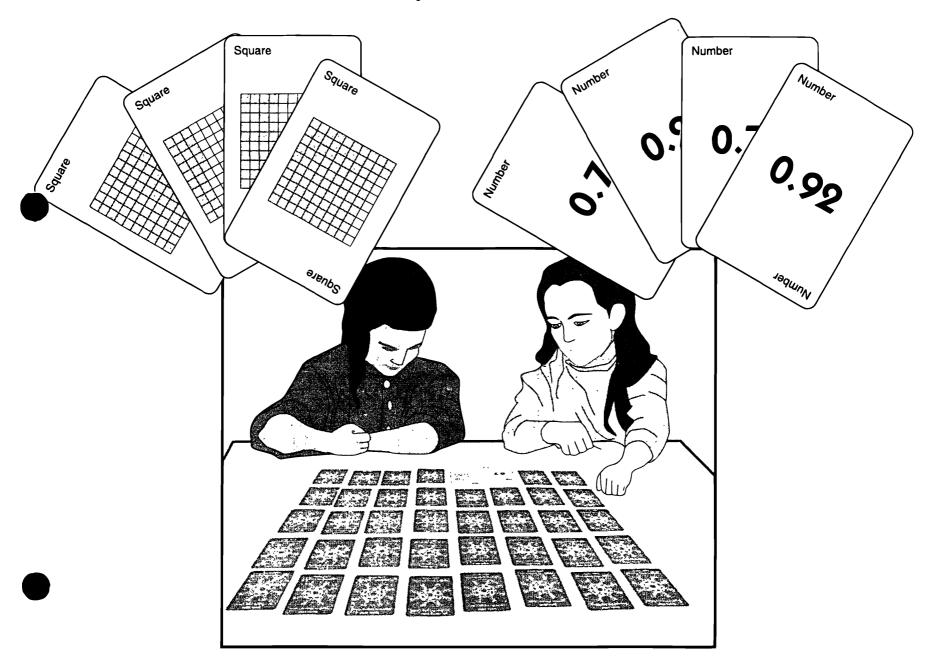
Higher decimal win

A game for 2 players.

You will need the SMILE Decimal Playing Cards.

Take out the 13 cards with 'Squares' and the 13 cards with 'Numbers'. Shuffle the cards.

Deal the cards, face down, in front of you.



Each player turns over one card.

The player with the higher decimal wins that round and keeps both cards.

Carry on until you have used all the cards.

The player with the most cards wins.

Variation

Try turning over 2 cards at a time, adding the two numbers together. The player with the higher decimal wins.

Decimal differences

A game for 2 players.

You will need the SMILE Decimal Playing Cards.

Take out the 13 cards with 'Squares' and the 13 cards with 'Numbers'. Shuffle the cards.

Deal the cards, face down, in front of you.



Each player turns over one card.

The player with the higher decimal wins that round, and their score is the difference between the two decimals.



e.g. Number

O.7 — Square

O.3 Talia scores 0.3

Record your results.

Janice

Carry on until you have used all the cards.

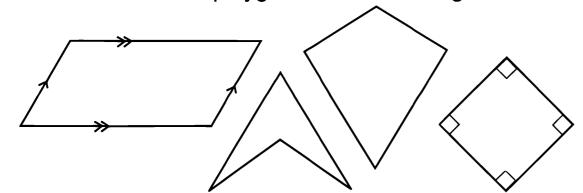
Total each player's score.

The player with the higher score wins.

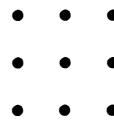
Sixteen Quadrilaterals

Definition: Quadrilateral

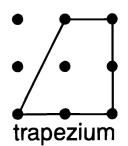
Quadrilaterals are polygons with four straight sides.



You can make 16 different quadrilaterals on a 9 point grid.



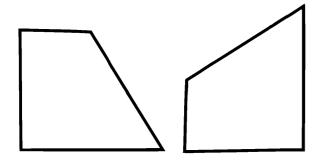
- Find all 16 quadrilaterals.
 (Remember none of your quadrilaterals can be congruent.)
 - draw them
 - label each quadrilateral with the correct mathematical name

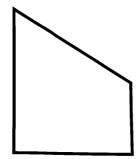


e.g.

Definition: Congruent

Congruent shapes have the same shape and size. e.g. These quadrilaterals are congruent.





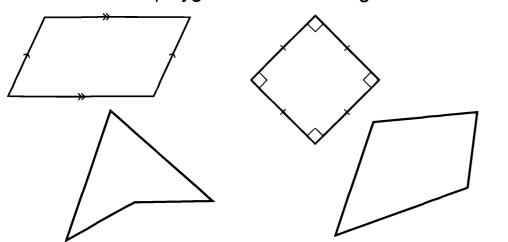
(You may like to use Smile 2163 Geometry Facts to find all the names of your quadrilaterals.)

- 2. You may like to investigate . . .
 - triangles on a 9 point grid
 - other polygons on a 9 point grid.

Sixteen Quadrilateras

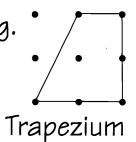
Definition: Quadrilateral

Quadrilaterals are polygons with four straight sides.



You can make 16 different quadrilaterals on a 9 point grid.

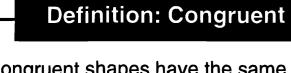
- • •
- Find all 16 quadrilaterals.
 (Remember none of your quadrilaterals can be congruent)
 - draw them
 - label each quadrilateral with the correct mathematical name



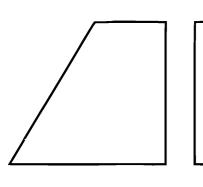
1,0,002,0

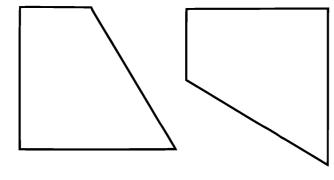
(You may like to use Smile 2163 Geometry Facts to find all the names of your quadrilaterals)

- 2. You may like to investigate ...
 - triangles on a 9 point grid
 - other polygons on a 9 point grid



Congruent shapes have the same shape and size. e.g. These quadrilaterals are congruent.



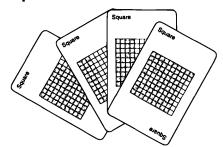


Matching decimals

;

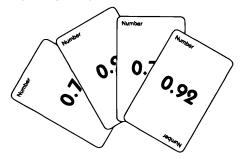
You will need the SMILE Decimal Playing Cards.

Take out the 13 cards with 'squares'.

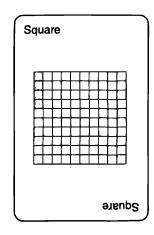


Put them in order of size – smallest first.

Take out the 13 cards with 'Numbers'.

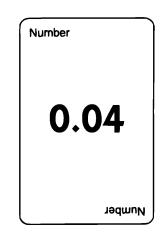


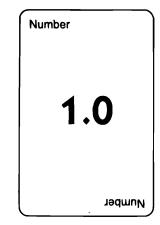
Match them to the 'Squares' cards.











- In your book:
- 1. Write the numbers out in order of size, smallest first.
- 2. Which is the larger 0.8 or 0.5?
- 3. Which is the smaller 0.72 or 0.65?

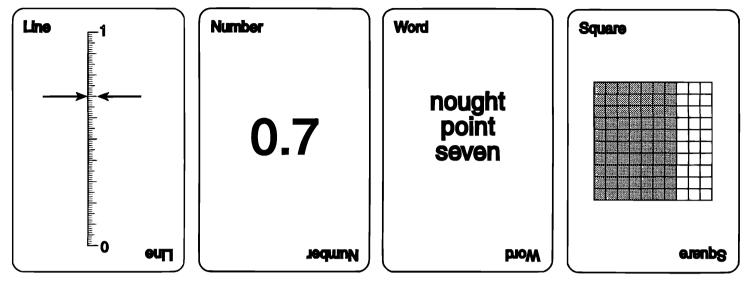
- 4. Which is the largest 0.8, 0.08 or 0.75?
- **5.** Write a number that comes between 0.5 and 0.8.
- 6. Write a number that comes between 0.35 and 0.4.

Decimal Sort

Smile **2369**

You will need the SMILE Decimal Playing Cards.

1. Find these 4 cards.



These cards show the same decimal expressed in four different ways. This is the 0.7 decimal 'set'.

- 2. Sort the remaining cards into decimal 'sets'.
- 3. Show the decimal 'sets' to your teacher.

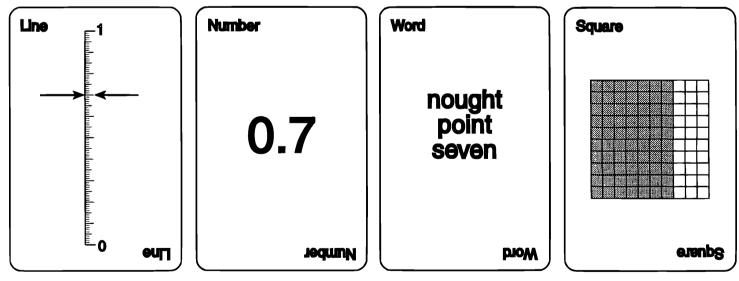
© RBKC SMILE Mathematics 2005

Decimal Sort

Smile **2369**

You will need the SMILE Decimal Playing Cards.

1. Find these 4 cards.



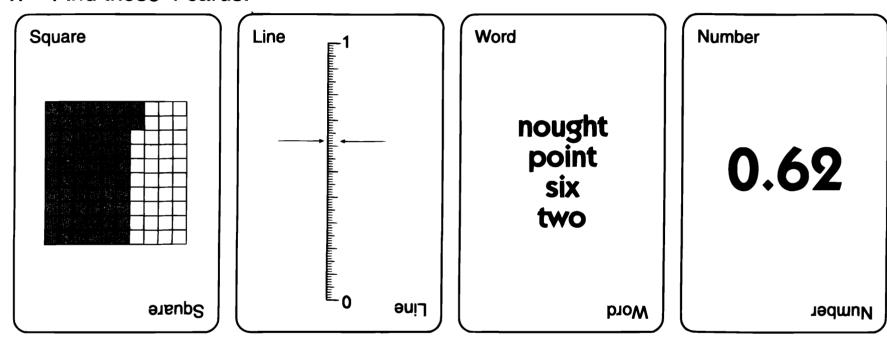
These cards show the same decimal expressed in four different ways. This is the 0.7 decimal 'set'.

- 2. Sort the remaining cards into decimal 'sets'.
- 3. Show the decimal 'sets' to your teacher.

Decimals sert

You will need the SMILE Decimal Playing Cards.

Find these 4 cards.



These cards show the same decimal expressed in four different ways. This is the 0.62 decimal 'set'.

- 2. Sort the remaining cards into decimal 'sets'.
- 3. Show the decimal 'sets' to your teacher.

Conversion Pack 2

An activity for 2 people

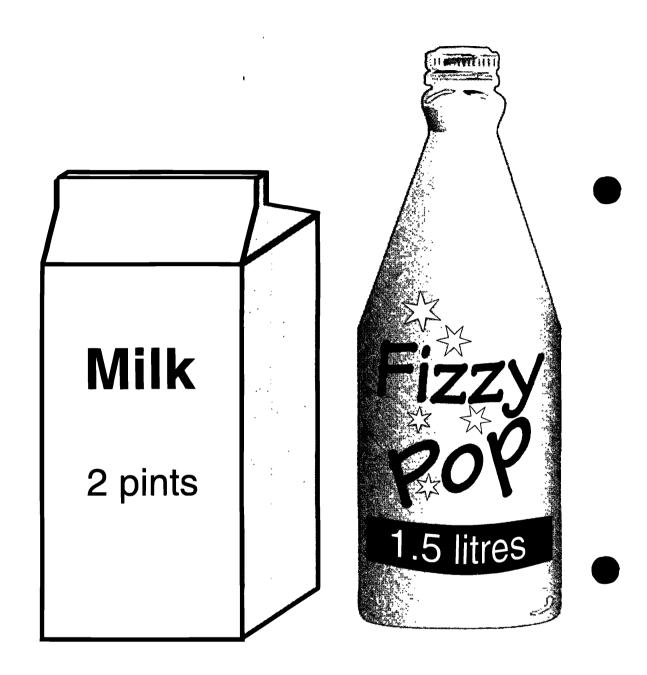
- Complete the problems on cards A F.
 You might find the conversion chart on the back of this envelope helpful.
- 2. Record your answers in your book. Show your working. Remember to include the units in your answers.
- 3. You need to know the conversions. Record them in your book and test each other on them.





Which is the cheaper petrol?





Which contains more liquid?



Which is longer ...

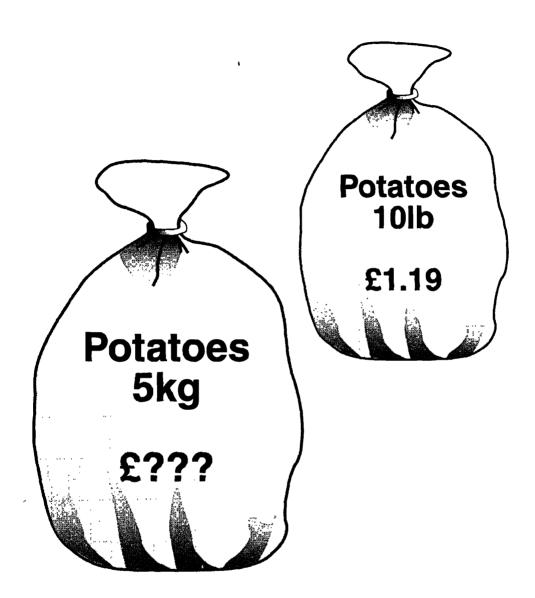
One Yard? or One Metre?





How many miles ... to Paris? to Lille?





How much should a 5kg bag of potatoes cost?



Andy is making mackerel paté

Recipé

Smoked mackerel......6oz
Cottage cheese.....6oz
Lemon juice

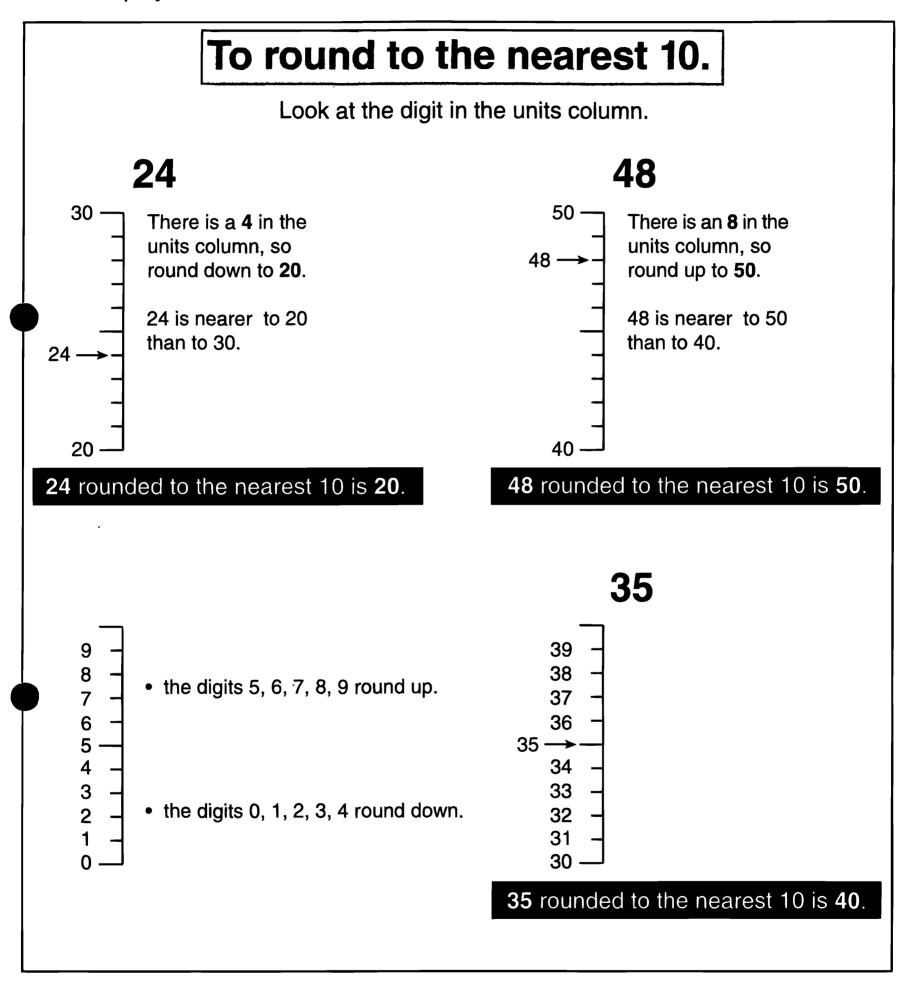


Is this enough cottage cheese?

Rounding to 10

An activity for 2 - 4 people.

You will need Smile 2226 Sum Number Cards and 20 counters of the same colour for each player.



- 1. In your book write down these numbers to the nearest 10.
 - **a)** 57
- **b)** 33
- **c)** 45
- **d)** 9

- **e)** 82
- **f)** 55
- **g)** 14
- **h)** 98
- 2. Turn over to play the Rounding to 10 Game.

Rounding to 10 Game

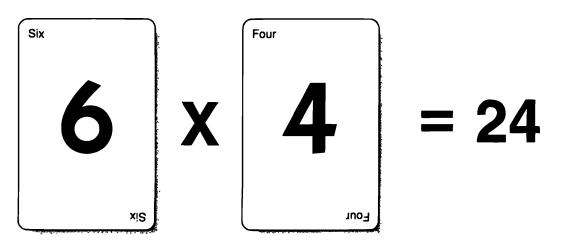
This is a game for 2 - 4 players.

Take out all the 3, 4, 5, 6, 7, 8 and 9 cards from Smile 2226 Sum Number Cards and 20 counters of the same colour for each player.

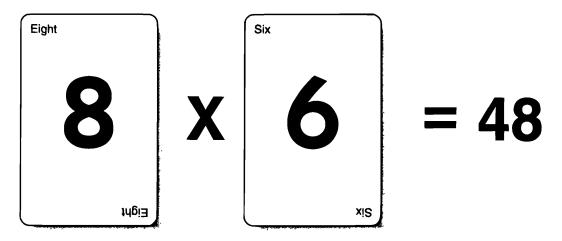
The Rules:

- Shuffle the cards.
- Place the cards face down.
- Take turns to turn over 2 cards.
- Multiply the two numbers together and round the answer to the nearest 10.
- Use a counter to cover up your rounded number on the board.
- The winner is the first player to get 3 in a line.
- Play the game several times.

Example:



24 rounded to the nearest 10 is 20. The counter can cover any 20 on the board.



48 rounded to the nearest 10 is **50**. The counter can cover any **50** on the board.

	10	30	20	10	30	40	20
	20	10	80	40	60	10	30
•	50	60	70	20	10	50	40
	10	30	10	20	30	20	10
	40	30	50	70	10	50	40
	60	20	80	40	60	50	10
•	20	10	40	20	30	10	20

Powers of Ten flags

1) Fill in the flags to show which operation you need to use.

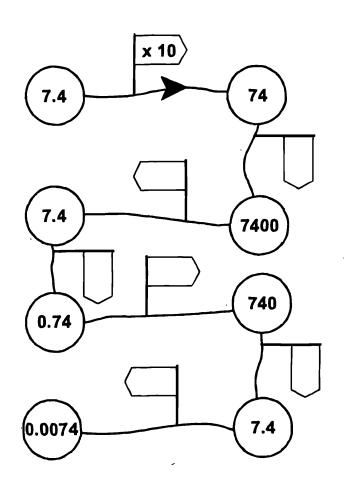
Choose from:

x 10 x 100 ÷ 10 ÷ 100

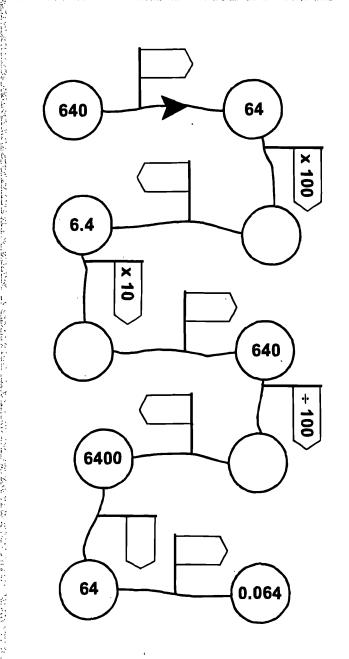
x 100 x 1000

÷ 1000

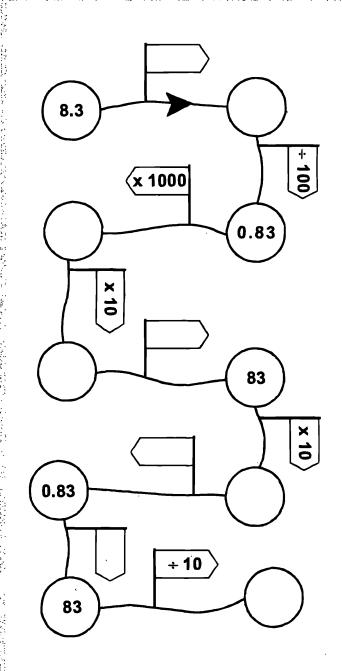




2) Fill in the flags and the circles.



3) This one is more challenging!

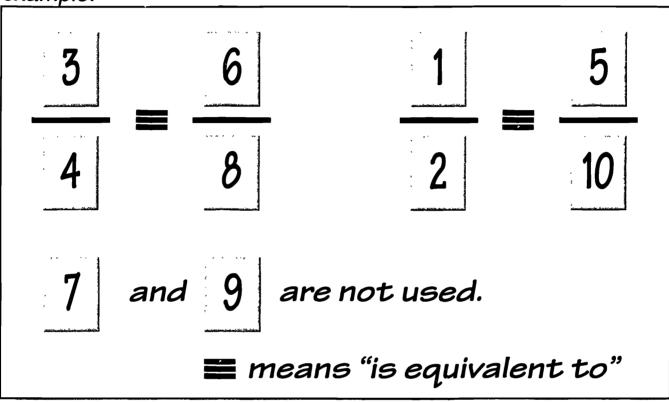


Equivalent Fraction Pairs

1 2 3 4 5 6 7 8 9 10

The numbers above can be used to make two pairs of equivalent fractions. No number can be used more than once.

example:



- 1. a) Find another way of making two pairs of equivalent fractions using the numbers 1 to 10.
 - b) Which numbers are not used?
- 2. a) How many equivalent fraction pairs can you make using the numbers 1 to 20?

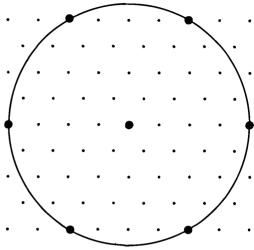
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20

Remember: No number can be used more than once.

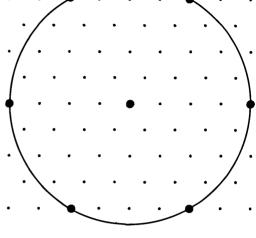
b) Which numbers are not used? Why?

Polygons in Circles
You will need 1cm dotted isometric paper and a pair of compasses.

Draw a circle radius 4cm on isometric paper. a) 1. There should be 6 points on the circumference of the circle.

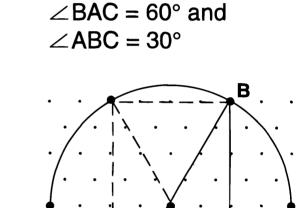


b) Using these 6 points and the centre of the circle, construct a right-angled triangle.



Draw the dotted lines

and explain why



c)

- 2. By drawing similar circles construct the following polygons and work out the angles in the polygons. You might like to use Smile 2163 Geometry Facts.
 - An equilateral triangle. a)
 - An isosceles triangle. b)
 - A rectangle. c)
 - A trapezium. d)
 - An arrowhead. e)
 - f) A rhombus.
 - g) A hexagon.
 - A pentagon. h)
- Which of your polygons are cyclic? 3.

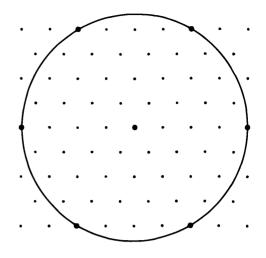
Definition of a cyclic polygon:

Any polygon whose vertices all lie on the circumference of a circle is called a cyclic polygon.

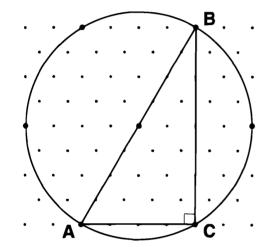
Polygons in Circles

You will need 1cm dotted isometric paper and a pair of compasses

1. a) Draw a circle of radius 4cm on isometric paper. There should be 6 points on the circumference of the circle.



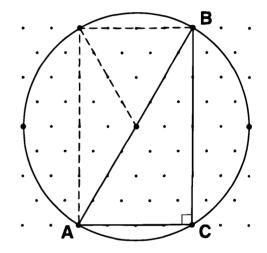
b) Using these 6 points and the centre of the circle construct a right angled triangle.



c) Draw the dotted lines and explain why

$$\angle$$
 BAC = 60° and

$$\angle$$
 ABC = 30°



- By drawing similar circles construct the following polygons and work out the angles in the polygons. You might like to use Smile 2163 Geometry Facts.
 - a. An equilateral triangle.
 - b. An isosceles triangle.
 - c. A rectangle.
 - d. A trapezium.
 - e. An arrowhead.
 - f. A rhombus.
 - g. A hexagon.
 - h. A pentagon.

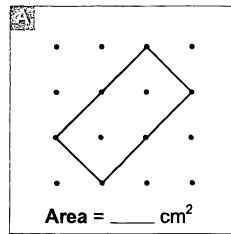
Definition of a cyclic polygon:

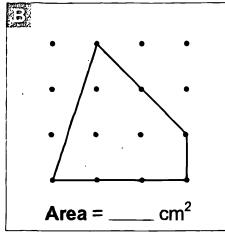
Any polygon whose vertices all lie on the circumference of a circle is called a cyclic polygon.

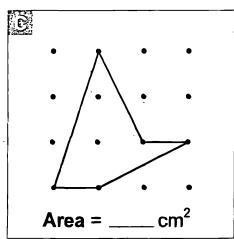
3. Which of your polygons are cyclic.

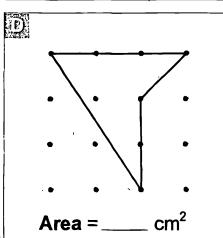
Areas of Polygons

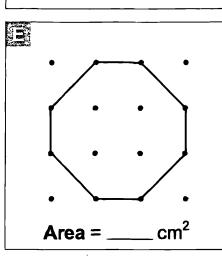
1. Calculate the areas of the polygons below.

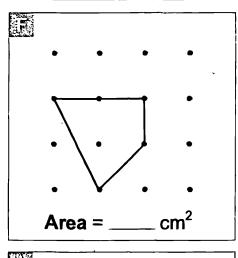


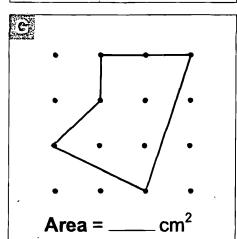


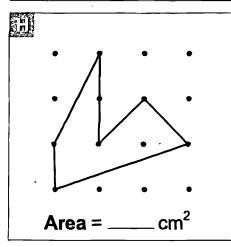


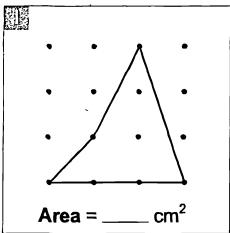






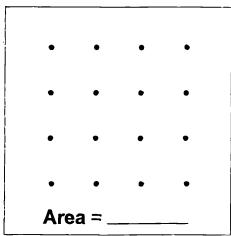


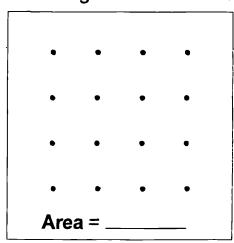


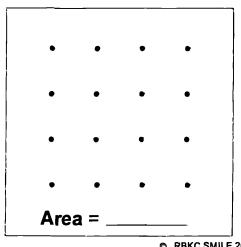


2. Sort the polygons in order of area, largest first.

3. Design 3 more polygons on the 4 x 4 grids below and find their area.

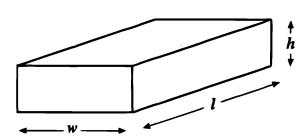






Solid Expressions

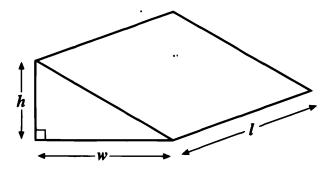
This cuboid has height h, width w and length l.



An expression for the **volume** of this cuboid is hwl. An expression for the **surface area** of this cuboid is 2(hw + hl + wl).

An expression for the **total edge length** of this cuboid is 4(h + w + l).

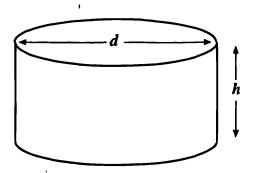
1. This right-angled triangular prism has height h, width w and length l.



Work out:

- a) An expression for the volume.
- b) An expression for the surface area.
- c) An expression for the total edge length.

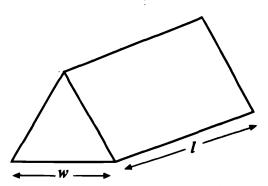
2. This cylinder has diameter d and height h.



a) Show that the surface area of the cylinder can be expressed as $\pi d^2 + \pi dh$

Work out:

- b) An expression for the volume.
- c) An expression for the total edge length.
- **3.** This equilateral triangular prism has width *w* and length *l*.



a) Show that the volume of this prism can be expressed as $\sqrt{3 lw^2}$

Work out:

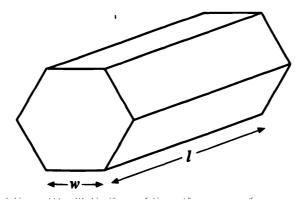
- b) An expression for the surface area.
- c) An expression for the total edge length.

4. Copy and complete this table:

	Cuboid	Right- angled triangular prism	Cylinder	Equilateral triangular prism
Diagram	A h	A N A I		W-W-A-I
Volume	hwl			$\frac{\sqrt{3} lw^2}{4}$
Surface area	2(hw+hl+wl)		$\frac{\pi d^2}{2} + \pi dh$	
Total edge length	4(h+w+l)			e e e

- **5.** Look carefully at the expression for each of the solids. How would you decide if an expression described:
 - a) volume?
 - b) surface area?
 - c) total edge length?

6. The regular hexagonal prism below has the dimensions shown.



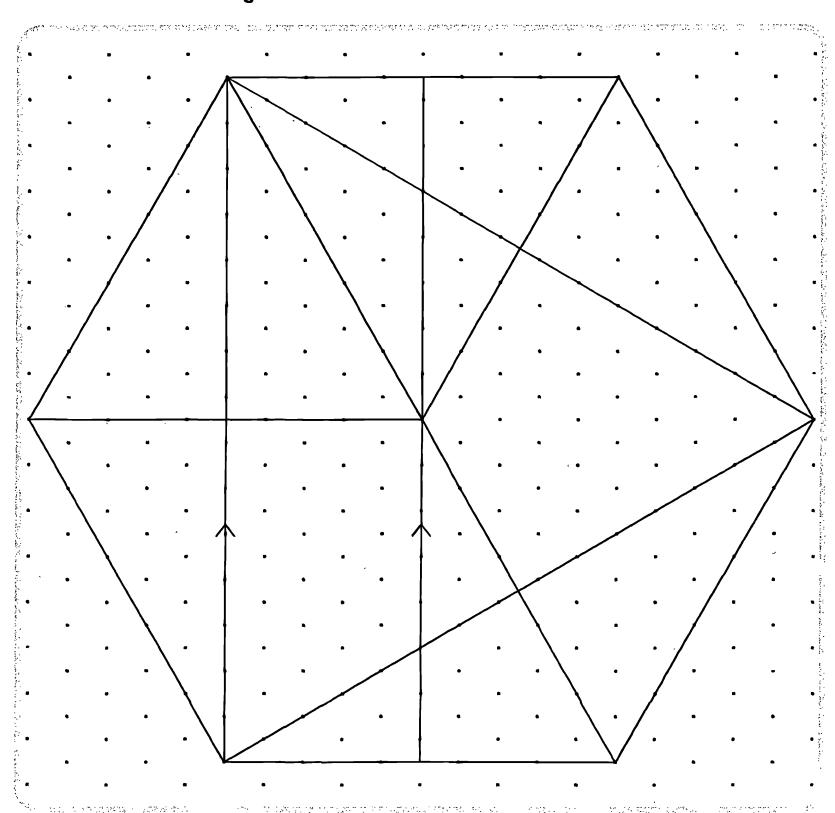
The three expressions for the hexagonal prism are:

$$6lw + 3\sqrt{3}w^2$$
 $12w + 6l$ $3\sqrt{3}$

- a) Which of the three expressions describes the volume of the regular hexagonal prism?
- b) Which of the three expressions describes the surface area of the regular hexagonal prism?
- c) Which of the three expressions describes the total edge length of the regular hexagonal prism?

Angles in a Regular Hexagon

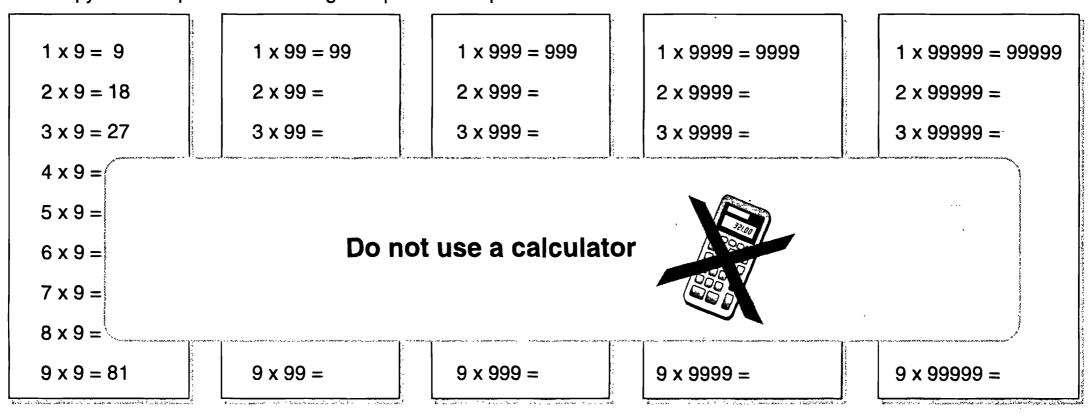
The regular hexagon below is drawn on isometric dotted paper. Find all the unmarked angles.



Smile 2385

Nine Nine Nine

1. Copy and complete the following multiplication sequences.



- 2. Write about your methods. How did you work out the sequences?
- **3.** Do your methods still work for:

MultiplicationReview

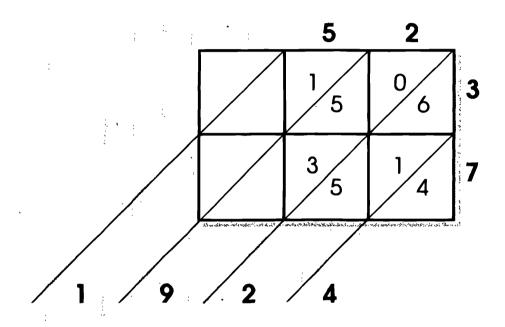
An activity for 2 or more people

In this pack there are five methods of multiplication.

For each one:

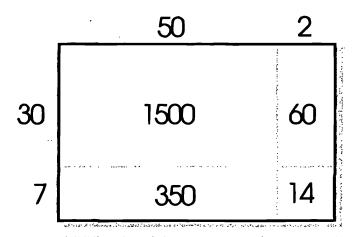
- 1. Look at the method of multiplication.
- 2. Describe what was done.
- 3. Check that the method works by trying it out on 27 x 69.
- 4. Try to work out why the method works.





- 1. Look at this method of multiplication.
- 2. Describe what was done.
- 3. Check that this method works by trying it out on 27 x 69.
- 4. Try to work out why the method works.





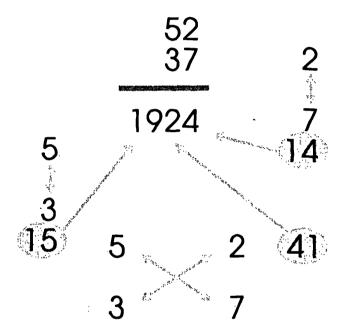
$$1500 + 350 + 60 + 14 = 1924$$

- 1. Look at this method of multiplication.
- 2. Describe what was done.
- 3. Check that this method works by trying it out on 27 x 69.
- Try to work out why the method works.



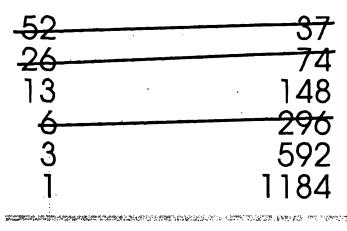
- 1. Look at this method of multiplication.
- 2. Describe what was done.
- 3. Check that this method works by trying it out on 27 x 69.
- **4.** Try to work out why the method works.

D



- 1. Look at this method of multiplication.
- 2. Describe what was done.
- 3. Check that this method works by trying it out on 27 x 69.
- Try to work out why the method works.





1924

- 1. Look at this method of multiplication.
- 2. Describe what was done.
- 3. Check that this method works by trying it out on 27 x 69.
- Try to work out why the method works.

Multiples of Ten

The **multiples** of a number are the numbers that appear in its multiplication table.

Example:

The multiples of 10 are 10, 20, 30, 40, ...

1. This number square contains pairs of numbers next to each other whose sum is a multiple of 10.

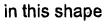
1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36

Example:

$$12 + 18 = 30$$

Find and mark five other pairs of numbers whose sum is a multiple of 10.

2. On this grid mark the three groups of numbers

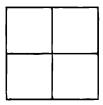


whose sum is a multiple of 10.

1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36

3. On this grid mark the five groups of numbers

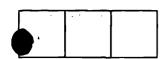
in this shape



whose sum is a multiple of 10.

1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36

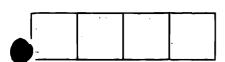
4. On this grid mark the two groups of numbers in this shape



whose sum is a multiple of 10.

1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36

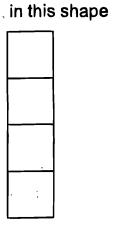
5. On this grid mark the four groups of numbers in this shape



whose sum is a multiple of 10.

1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36

6. On this grid mark the four groups of numbers



whose sum is a multiple of 10.

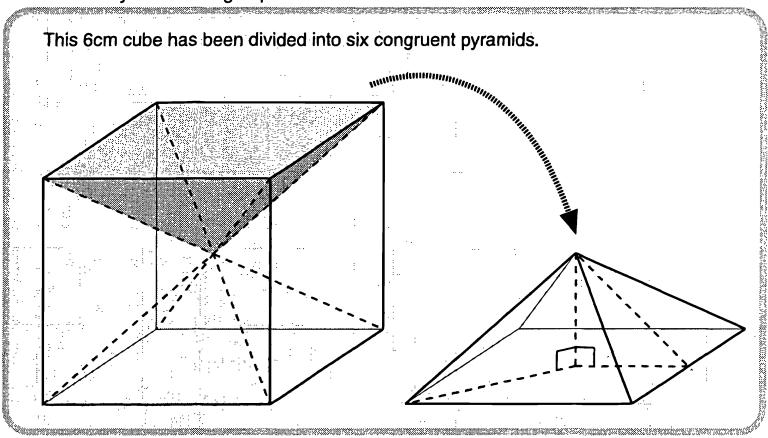
1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36

7. What other groups of numbers can you find whose sum is a multiple of 10? Mark them on the grid below.

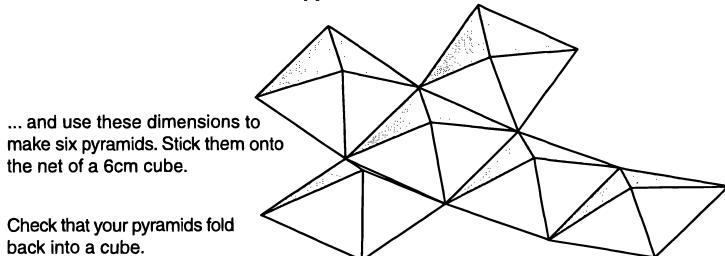
1	2.	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36

Six Pyramids

An activity for a small group.







Now fold the cube net so that the pyramids are on the outside.

Solve the problems below for your new solid.

For each problem assume there are no hollow spaces inside the solid.

What is the volume of the new solid?

new solid?

Has the new solid got 12 faces or 24? Justify your answer.

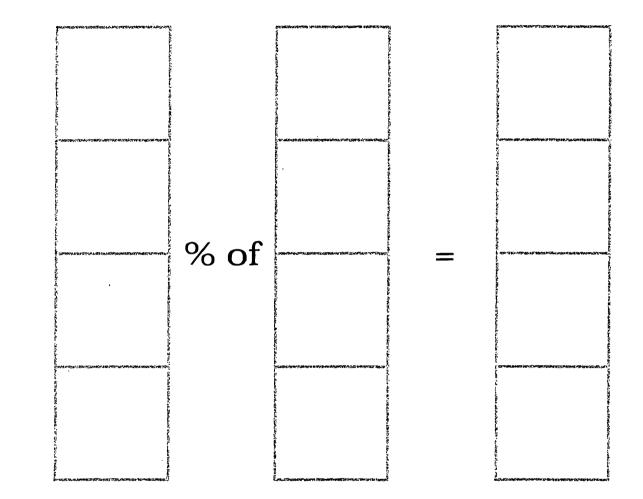
Can you draw a net for the new solid using ruler and compasses only?

What is the surface area of the

Percentage Puzzle

You will need: scissors, glue

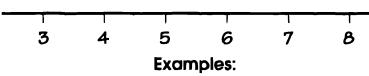
- Cut out the numbers at the bottom of this sheet.
- Place them on the sheet to make four true statements.
- Do not stick them down until you are sure that all four statements are true.



fo		,		r	,	F
1	10	15	20	25	35	45
1	50	65	70	7 5	80	150

Consecutive Products

Consecutive numbers lie next to each other on the number line.



6 and 7 are consecutive.5, 6 and 7 are consecutive.4 and 6 are **not** consecutive.

The **product** of two numbers is found by multiplying them together.

Example:

The product of 6 and 12 is 72 because $6 \times 12 = 72$

Example:

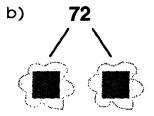
42 is the product of two consecutive numbers.

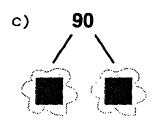
 $6 \times 7 = 42$

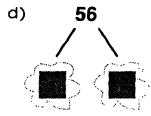


1. Copy the following and find the two missing consecutive numbers.

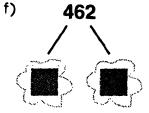
a) 12

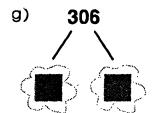


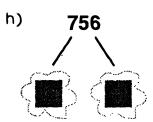




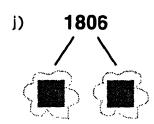
e) 110

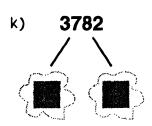


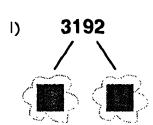




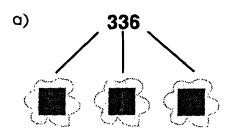
i) 210

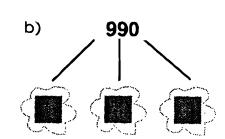


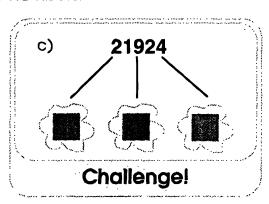




2. Copy the following and find the three missing consecutive numbers.







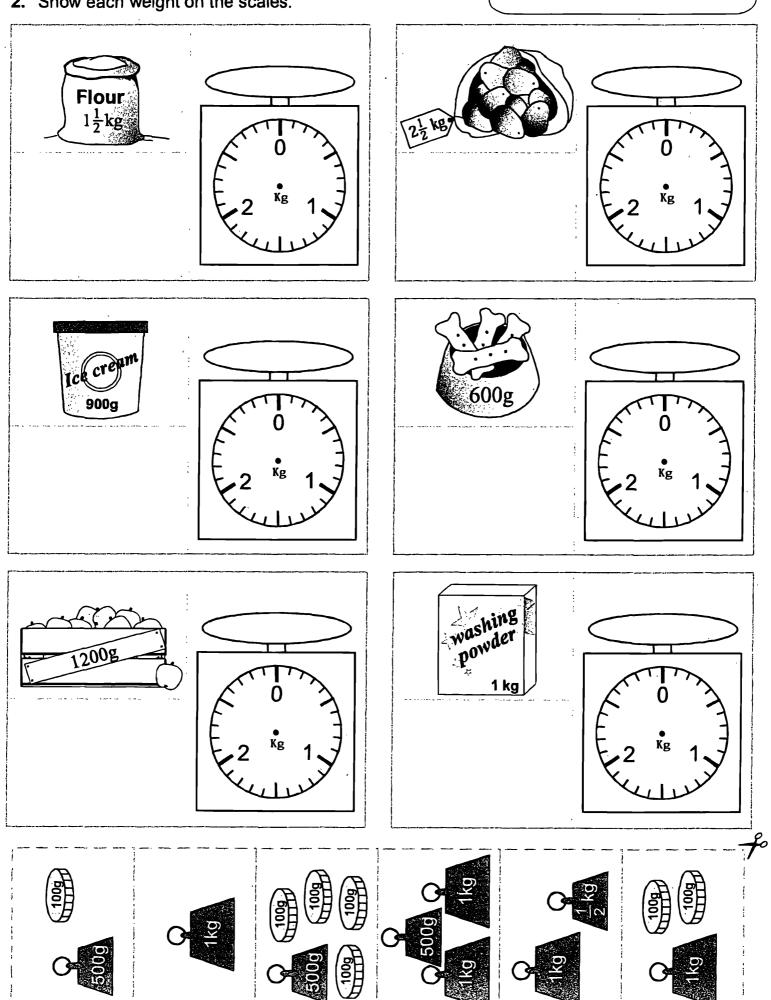
© RBKC SMILE 2001

Matching Weights You will need: glue, scissors

1. Cut out the weights at the bottom of this worksheet and match them to the objects.

2. Show each weight on the scales.

Remember 1kg = 1000g



Sensible Answers

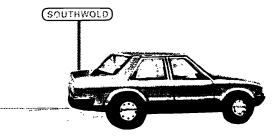
Do not use a calculator.



Problem:

18 people are going to Southwold by car. Four people can fit in each car.

How many cars are needed?



Method:

 $18 \div 4 = 4.5$

The answer to 18 divided by 4 is between 4 and 5. If you gave the answer 4 only 16 people could go. 2 people would be left behind.

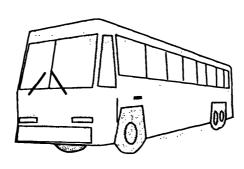
So the sensible answer is 5 cars.

The sensible answer depends upon the original problem.

Solve the problems below. For each problem, show your method and make sure that your answer is sensible.

1. 169 students are going on a school trip to Margate. Each coach can carry 50 students.

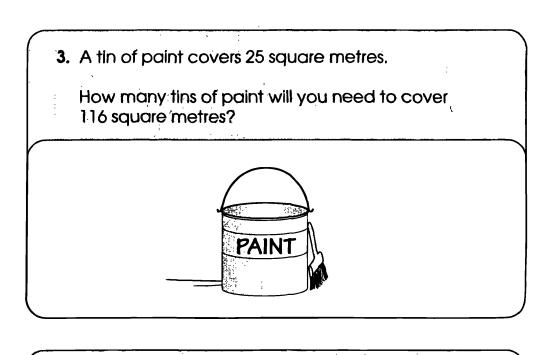
How many coaches will be needed?



2. A football club has 49 members. A football team needs 11 players.

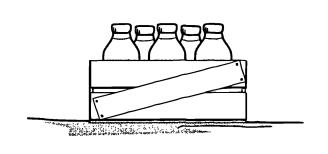
How many teams can the football club field?





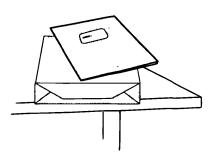
Milk is sold in crates of 12 Identical bottles.
 A wholesaler has 102 Identical bottles.

How many crates can she make up?



5. Exercise books are sold in packets of 10. Ms Kershaw wants to order exercise books for 67 students.

How many packets of books does Ms Kershaw need to order?



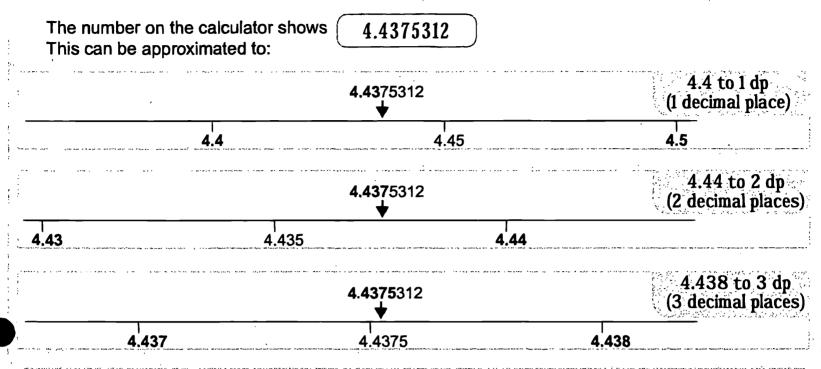
6. Jameela wants to record her favourite television programme.

Each episode lasts 40 minutes.

How many episodes can she record on a 3 hour tape.

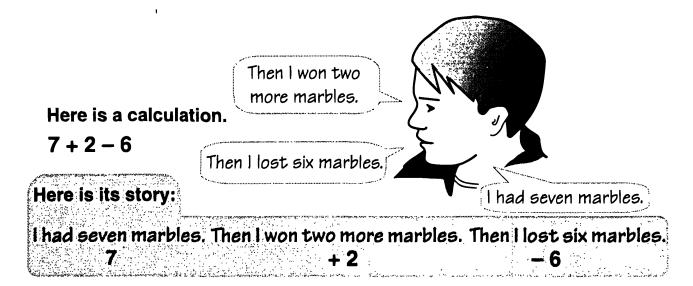


Decimal Places Match



Match each calculator a	answer to its three appro	ximations.	,
Number on calculator 3.4457982	Number to 2 decimal places 3.45 to 2 dp	Number to 1 decimal place 3.6 to 1 dp	Number to 3 decimal places 3.456 to 3 dp
Number to 1 decimal place 3.5 to 1 dp	Number to 3 decimal places 3.557 to 3 dp	Number on calculator 3.5471035	Number to 2 decimal places 3.47 to 2 dp
Number to 2 decimal places 3.46 to 2 dp	Number on calculator 3.4561207	Number to 3 decimal places 3.547 to 3 dp	Number to 1 decimal place 3.4 to 1 dp
Number to 1 decimal place 3.5 to 1 dp	Number to 3 decimal places 3,446 to 3 dp	Number on calculator 3.5568156	Number to 2 decimal places 3.56 to 2 dp
Number to 1 decimal place 3.5 to 1 dp	Number to 3 decimal places 3.467 to 3 dp	Number to 2 decimal places 3.55 to 2 dp	Number on calculator 3.4672331

Number Stories

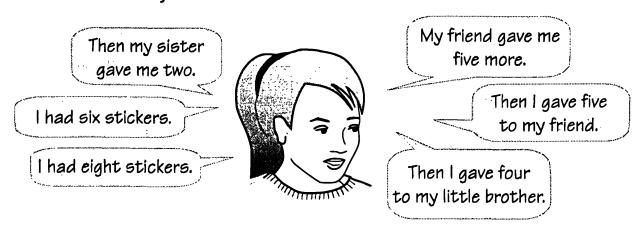


1. Here are two other calculations.

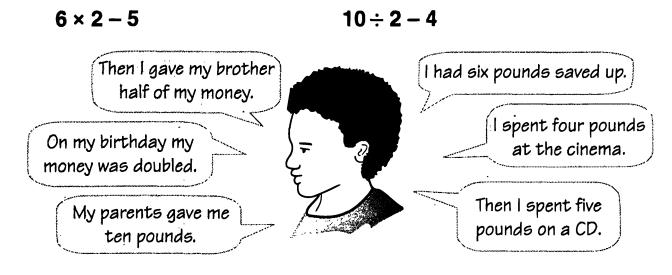
$$8 - 5 + 2$$

$$6 + 5 - 4$$

Use the sentences below to make a number story for each calculation. Write them down in your book.



2. Here are two more calculations. Use the sentences below to make a number story for each calculation. Write them down in your book.



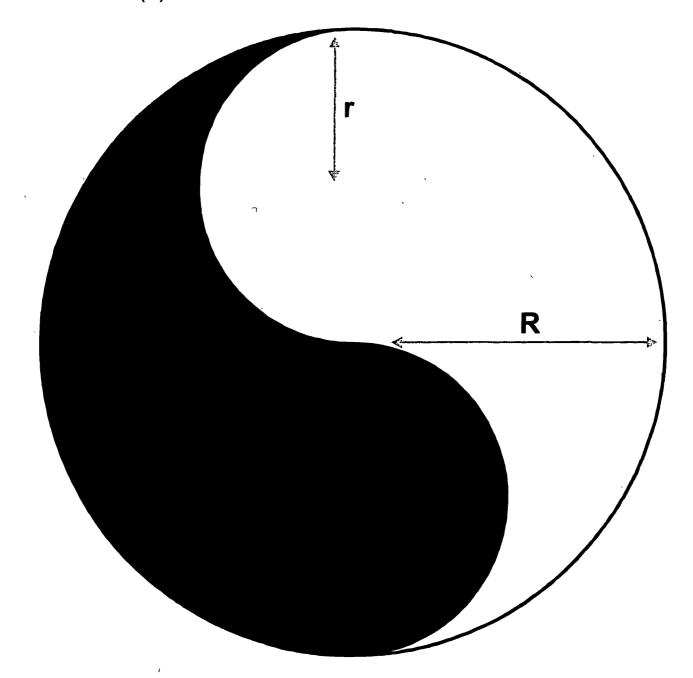
3. Make up number stories for each of these calculations and show them to your teacher.

$$8 - 3 + 7$$

$$4 \times 3 + 6$$

Circle Cut

In the diagram below, the radius of each small semicircle (r) is half the radius of the outer circle (R).



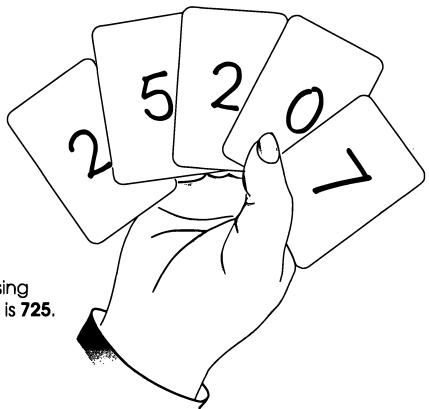
Make one straight cut across the circle so that each of the two regions is exactly halved.

Use algebra to justify your answer.

Play Your Cards Right

A game for four players in two teams.

You will need a set of number cards (digits between 0 and 9) and the targets from worksheet 2401a.



Target!

Largest odd number

The largest odd number using three of the number cards is **725**.

The Rules

Shuffle the number cards.

Deal each team five number cards.

Place the targets face down in a pile.

Turn over the first target.

Use any three of the number cards to get as close to the target as possible.

The team who gets the closest scores one point.

Place the used number cards at the bottom of the pack and replace them with three new cards.

Turn over the next target and repeat the game.

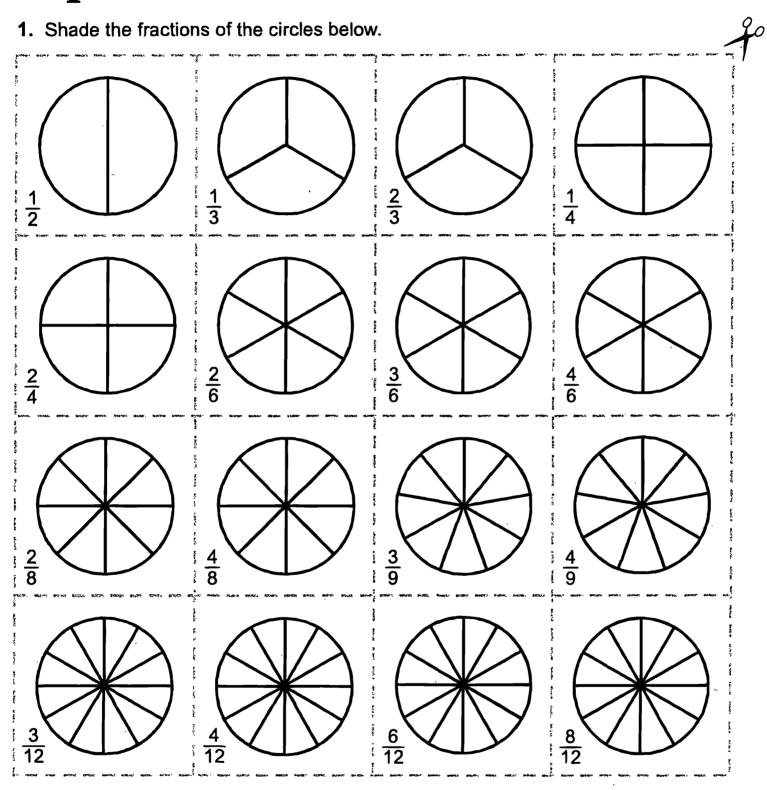
The team with the highest score wins.

Targets for

Play Your Cards Right

Target! Nearest even number to 500	Target! Nearest number to 100
Target! Largest odd number	Target! Largest even number
Target! Nearest odd number to 400	Target! Nearest number to 250
Target! Nearest number to 723	Target! Nearest number to 1000
Target! Smallest odd number	Target! Smallest even number
Target! Largest number	Target! Smallest number

Equivalent Fractions Sort



- 2. Cut out all the fractions and arrange them in order of size.
- 3. Which of the fractions are equivalent? (equivalent fractions represent the same proportion).
- 4. Find 2 fractions which are equivalent to $\frac{3}{4}$.

Missing the Point



Example:

Sheila saw this addition and realised that one of the numbers being added had a decimal point either missing or in the wrong place.

$$53.7 + 1.26 = 66.3$$
 ×

She rewrote the addition correctly.

Do not use a calculator.

In each of the calculations below, one and only one of the decimal points is either missing or in the wrong place.

A Rewrite these additions to make them correct.

1.
$$40.5 + 24.05 = 28.1$$

3.
$$7 + 4 = 4.7$$

4.
$$7.77 + 7.07 = 84.77$$

5.
$$4.5 + 0.55 = 1$$

6.
$$0.003 + 7 = 7.3$$

B Rewrite these subtractions to make them correct.

2.
$$6.05 - 3.12 = 57.38$$

3.
$$4.9 - 4.9 = 44.1$$

4.
$$5 - 0.01 = 0.49$$

6.
$$6 - 3.12 = 56.88$$



Commercial References

0001 - 2403 in numerical order

List of abbreviations on 2001 SMILE Network

ANGLE SMILE software 'Angle Estimation' available from SMILE Mathematics

COORD SMILE software 'Co-ordinates' available from SMILE Mathematics

DfEE SMILE software Ref: 0260/2000 available from DfEE

DIME A variety of materials available from Tarquin

ENRICH

SMILE software 'Co-ordinates' available from SMILE Mathematics

SMILE software 'Graphing' available from SMILE Mathematics

INVEST

SMILE software 'Investigation' available from SMILE Mathematics

INVEST Paxx

Page number from Student's Handbook 'Investigation' available from

SMILE Mathematics

MA Poster Poster available from Mathematics Association

MATH PUZ SMILE software 'Mathematical Puzzles' available from SMILE Mathematics

MOVE SMILE software 'Movement' available from SMILE Mathematics

MOVE Pgxx Page number from Student's Handbook 'Movement' to be printed from the

CD available from SMILE Mathematics

NUM CD 'Numeracy' available from SMILE Mathematics

PROP/NO CD 'Properties of Number' available from **SMILE Mathematics**

PROP/NO Pgxx Page number from Student's Handbook 'Properties of Number' to be

printed from the CD available from SMILE Mathematics

SENSE/NO SMILE software 'Sense of Number' available from **SMILE Mathematics** SENSE/NO PgxxPage number from Student's Handbook 'Sense of Number' to be printed

from the CD available from SMILE Mathematics

TARQUIN Poster Poster available from Tarquin

List of Commercial Referenced activities in SMILE number order.

0581	Using a Mirror (DIME - Reflection Activities PP)	1340	Pattern and Notation (DIME - Pre-Algebra)
0778	Tangram Tree (MA Poster)	1341	Number Machines (DIME - Pre-Algebra PP)
0906	Tak Tiles A (DIME - TakTiles PP3)	1342	Mappings and Graphs (DIME - Pre-Algebra)
0907	Tak Tiles B (DIME - TakTiles PP3)	1343	Simple Mappings (DIME - Pre-Algebra PP)
0908	Tak Tiles C (DIME - TakTiles PP3)	1344	Further Mappings (DIME - Pre-Algebra PP)
0909	Tak Tiles D (DIME - TakTiles PP3)	1354	Euler Solids (MA Poster)
1331	Equal Angles (DIME - The Rotagram PP)	1482	Tricky Sum (MA Poster)
1332	Rotations (DIME - The Rotagram PP)	1604	Nim (SMILE software Mathematical Puzzles)
1333	Directions (DIME - The Rotagram PP)	1605	Guess (SMILE software Sense of Number)
1334	Recognising Solids (DIME - 3-D Sketching PP)	1606	GuessD (SMILE software Sense of Number)
1335	Sketching Solids (DIME - 3-D Sketching PP)	1607	Elephant (SMILE software Co-ordinates)
1336	Turning and Toppling (DIME - 3-D Sketching)	1608	Reverse (SMILE software Mathematical Puzzles)
1337	Reflections (DIME - 3-D Sketching PP)	1609	Maze (SMILE software Movement)
1338	Wedges (DIME - 3-D Sketching PP)	1620	Bounce (DfEE)
1339	Flags (DIME - Pre-Algebra PP)	1621	Rhino (SMILE software Co-ordinates)

1622	Vectmeet (SMILE software Movement)	1796	Plotter (SMILE software Graphing)
1624	Snooker (SMILE software Angle Estimation)	1798	Quilts (SMILE software Investigations)
1625	Box (SMILE software Sense of Number)	1820	Parallels (SMILE software Graphing)
1626	Boat (SMILE software Mathematical Puzzles)	1833	Magic (SMILE software Numeracy)
1641	Lines (SMILE software Co-ordinates)	1834	Tenners (SMILE software Numeracy)
	Take Part (Software - DIEE)	1835	Magnify (SMILE software Sense of Number)
1651	Frog (SMILE software Mathematical Puzzles)	1836	3inaline (SMILE software Co-ordinates)
1652	Jugs (SMILE software Mathematical Puzzles)	1840	PointsAndLines (SMILE software Graphing)
1653	Master(SMILE software Mathematical Puzzles)	1841	Interlocking Squares (DIME - Shape
1654	Racegame (SMILE software Movement)		Recognition PP1)
1666	Tower (SMILE software Sense of Number)	1842	Shapes Jigsaw (DIME - Shape
1667	Pilot (SMILE software Movement)		Recognition PP2)
1691	Predict (SMILE software Mathematical Puzzles)	1851	Regions (SMILE software Graphing)
1702	Circle (SMILE software Investigations)	1852	Foxes and Chickens (SMILE software Graphing)
1708	Factor (SMILE software Properties of Number)	1853	Pinball (SMILE software Investigations)
1714	Queens (SMILE Properties of Number Students'	1855	Quadratic Mappings (DIME - Pre-Algebra PP)
	HB Pg 35)	1866	Mirror Match (DIME - Reflection Activities PP)
1715	Locate (SMILE software Co-ordinates)	1876	Fill the Shape (DIME - Build-up PP)
1718	Line Symmetry A 1 - 4 (DIME - Line	1877	Add a Cube or Two (DIME - Build-up PP)
	Symmetry Puzzles A PP5A)	1878	Two Blocks (DIME - Build-up PP)
1719	Line Symmetry A 5 - 10 (DIME - Line	1879	Build and Balance (DIME - Build-up PP)
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	Symmetry Puzzles A PP5A)	1880	More than Two Blocks (DIME - Build-up PP)
	Symmetry Puzzles A PP5A) Angle 90° (SMILE software Angle Estimation)		More than Two Blocks (DIME - Build-up PP) Wedges 1 (DIME - Build-up PP)
1721		1882	
1721 1728	Angle 90° (SMILE software Angle Estimation)	1882 1883	Wedges 1 (DIME - Build-up PP)
1721 1728 1729	Angle 90° (SMILE software Angle Estimation) BoxD (SMILE software Sense of Number)	1882 1883	Wedges 1 (DIME - Build-up PP) Wedges 2 (DIME - Build-up PP) Regular Tilings 1 (DIME - Regular Tilings Project)
1721 1728 1729 1730	Angle 90° (SMILE software Angle Estimation) BoxD (SMILE software Sense of Number) Minimax (SMILE software Sense of Number)	1882 1883	Wedges 1 (DIME - Build-up PP) Wedges 2 (DIME - Build-up PP) Regular Tilings 1 (DIME - Regular Tilings
1721 1728 1729 1730 1731	Angle 90° (SMILE software Angle Estimation) BoxD (SMILE software Sense of Number) Minimax (SMILE software Sense of Number) Wall (SMILE software Sense of Number)	1882 1883 1889	Wedges 1 (DIME - Build-up PP) Wedges 2 (DIME - Build-up PP) Regular Tilings 1 (DIME - Regular Tilings Project) • Use A Triangles, B Convex Quadrilaterals, C Concave Quadrilaterals, E 2 Sizes of Squares. • For each activity do questions 1 - 3.
1721 1728 1729 1730 1731 1732	Angle 90° (SMILE software Angle Estimation) BoxD (SMILE software Sense of Number) Minimax (SMILE software Sense of Number) Wall (SMILE software Sense of Number) Rose (SMILE software Investigations)	1882 1883 1889	Wedges 1 (DIME - Build-up PP) Wedges 2 (DIME - Build-up PP) Regular Tilings 1 (DIME - Regular Tilings Project) • Use A Triangles, B Convex Quadrilaterals, C Concave Quadrilaterals, E 2 Sizes of Squares. • For each activity do questions 1 - 3. Regular Tilings 2 (DIME - Regular Tilings
1721 1728 1729 1730 1731 1732 1745	Angle 90° (SMILE software Angle Estimation) BoxD (SMILE software Sense of Number) Minimax (SMILE software Sense of Number) Wall (SMILE software Sense of Number) Rose (SMILE software Investigations) 3D Maze (SMILE software Movement)	1882 1883 1889	Wedges 1 (DIME - Build-up PP) Wedges 2 (DIME - Build-up PP) Regular Tilings 1 (DIME - Regular Tilings Project) • Use A Triangles, B Convex Quadrilaterals, C Concave Quadrilaterals, E 2 Sizes of Squares. • For each activity do questions 1 - 3. Regular Tilings 2 (DIME - Regular Tilings Project)
1721 1728 1729 1730 1731 1732 1745	Angle 90° (SMILE software Angle Estimation) BoxD (SMILE software Sense of Number) Minimax (SMILE software Sense of Number) Wall (SMILE software Sense of Number) Rose (SMILE software Investigations) 3D Maze (SMILE software Movement) Identify (SMILE software Properties of Number)	1882 1883 1889	Wedges 1 (DIME - Build-up PP) Wedges 2 (DIME - Build-up PP) Regular Tilings 1 (DIME - Regular Tilings Project) • Use A Triangles, B Convex Quadrilaterals, C Concave Quadrilaterals, E 2 Sizes of Squares. • For each activity do questions 1 - 3. Regular Tilings 2 (DIME - Regular Tilings
1721 1728 1729 1730 1731 1732 1745 1746	Angle 90° (SMILE software Angle Estimation) BoxD (SMILE software Sense of Number) Minimax (SMILE software Sense of Number) Wall (SMILE software Sense of Number) Rose (SMILE software Investigations) 3D Maze (SMILE software Movement) Identify (SMILE software Properties of Number) Define (SMILE software Properties of Number)	1882 1883 1889	Wedges 1 (DIME - Build-up PP) Wedges 2 (DIME - Build-up PP) Regular Tilings 1 (DIME - Regular Tilings Project) • Use A Triangles, B Convex Quadrilaterals, C Concave Quadrilaterals, E 2 Sizes of Squares. • For each activity do questions 1 - 3. Regular Tilings 2 (DIME - Regular Tilings Project) • Use F Polygons.
1721 1728 1729 1730 1731 1732 1745 1746 1747	Angle 90° (SMILE software Angle Estimation) BoxD (SMILE software Sense of Number) Minimax (SMILE software Sense of Number) Wall (SMILE software Sense of Number) Rose (SMILE software Investigations) 3D Maze (SMILE software Movement) Identify (SMILE software Properties of Number) Define (SMILE software Properties of Number) Darts (SMILE software Numeracy)	1882 1883 1889	Wedges 1 (DIME - Build-up PP) Wedges 2 (DIME - Build-up PP) Regular Tilings 1 (DIME - Regular Tilings Project) Use A Triangles, B Convex Quadrilaterals, C Concave Quadrilaterals, E 2 Sizes of Squares. For each activity do questions 1 - 3. Regular Tilings 2 (DIME - Regular Tilings Project) Use F Polygons. Do questions 1 - 4. Regular Tilings 3 (DIME- Regular Tilings Project)
1721 1728 1729 1730 1731 1732 1745 1746 1747 1755	Angle 90° (SMILE software Angle Estimation) BoxD (SMILE software Sense of Number) Minimax (SMILE software Sense of Number) Wall (SMILE software Sense of Number) Rose (SMILE software Investigations) 3D Maze (SMILE software Movement) Identify (SMILE software Properties of Number) Define (SMILE software Properties of Number) Darts (SMILE software Numeracy) Hopslide (SMILE software Mathematical Puzzles)	1882 1883 1889	Wedges 1 (DIME - Build-up PP) Wedges 2 (DIME - Build-up PP) Regular Tilings 1 (DIME - Regular Tilings Project) • Use A Triangles, B Convex Quadrilaterals, C Concave Quadrilaterals, E 2 Sizes of Squares. • For each activity do questions 1 - 3. Regular Tilings 2 (DIME - Regular Tilings Project) • Use F Polygons. • Do questions 1 - 4. Regular Tilings 3 (DIME- Regular Tilings Project) • Use D Pentagons.
1721 1728 1729 1730 1731 1732 1745 1746 1747 1755 1756	Angle 90° (SMILE software Angle Estimation) BoxD (SMILE software Sense of Number) Minimax (SMILE software Sense of Number) Wall (SMILE software Sense of Number) Rose (SMILE software Investigations) 3D Maze (SMILE software Movement) Identify (SMILE software Properties of Number) Define (SMILE software Properties of Number) Darts (SMILE software Numeracy) Hopslide (SMILE software Mathematical Puzzles) Tadpoles (SMILE software Mathematical Puzzles)	1882 1883 1889 1890	Wedges 1 (DIME - Build-up PP) Wedges 2 (DIME - Build-up PP) Regular Tilings 1 (DIME - Regular Tilings Project) Use A Triangles, B Convex Quadrilaterals, C Concave Quadrilaterals, E 2 Sizes of Squares. For each activity do questions 1 - 3. Regular Tilings 2 (DIME - Regular Tilings Project) Use F Polygons. Do questions 1 - 4. Regular Tilings 3 (DIME- Regular Tilings Project) Use D Pentagons. Do questions 1 - 3.
1721 1728 1729 1730 1731 1732 1745 1746 1747 1755 1756 1767	Angle 90° (SMILE software Angle Estimation) BoxD (SMILE software Sense of Number) Minimax (SMILE software Sense of Number) Wall (SMILE software Sense of Number) Rose (SMILE software Investigations) 3D Maze (SMILE software Movement) Identify (SMILE software Properties of Number) Define (SMILE software Properties of Number) Darts (SMILE software Numeracy) Hopslide (SMILE software Mathematical Puzzles) Tadpoles (SMILE software Mathematical Puzzles) AddsUpTo (SMILE software Numeracy)	1882 1883 1889 1890	Wedges 1 (DIME - Build-up PP) Wedges 2 (DIME - Build-up PP) Regular Tilings 1 (DIME - Regular Tilings Project) • Use A Triangles, B Convex Quadrilaterals, C Concave Quadrilaterals, E 2 Sizes of Squares. • For each activity do questions 1 - 3. Regular Tilings 2 (DIME - Regular Tilings Project) • Use F Polygons. • Do questions 1 - 4. Regular Tilings 3 (DIME- Regular Tilings Project) • Use D Pentagons. • Do questions 1 - 3. Line Symmetry B 1 - 3 (DIME- Line
1721 1728 1729 1730 1731 1732 1745 1746 1747 1755 1756 1767	Angle 90° (SMILE software Angle Estimation) BoxD (SMILE software Sense of Number) Minimax (SMILE software Sense of Number) Wall (SMILE software Sense of Number) Rose (SMILE software Investigations) 3D Maze (SMILE software Movement) Identify (SMILE software Properties of Number) Define (SMILE software Properties of Number) Darts (SMILE software Numeracy) Hopslide (SMILE software Mathematical Puzzles) Tadpoles (SMILE software Mathematical Puzzles) AddsUpTo (SMILE software Numeracy) Spirals (SMILE software Investigations)	1882 1883 1889 1890 1891	Wedges 1 (DIME - Build-up PP) Wedges 2 (DIME - Build-up PP) Regular Tilings 1 (DIME - Regular Tilings Project) Use A Triangles, B Convex Quadrilaterals, C Concave Quadrilaterals, E 2 Sizes of Squares. For each activity do questions 1 - 3. Regular Tilings 2 (DIME - Regular Tilings Project) Use F Polygons. Do questions 1 - 4. Regular Tilings 3 (DIME- Regular Tilings Project) Use D Pentagons. Do questions 1 - 3. Line Symmetry B 1 - 3 (DIME- Line Symmetry Puzzles B PP5B)
1721 1728 1729 1730 1731 1732 1745 1746 1747 1755 1767 1776	Angle 90° (SMILE software Angle Estimation) BoxD (SMILE software Sense of Number) Minimax (SMILE software Sense of Number) Wall (SMILE software Sense of Number) Rose (SMILE software Investigations) 3D Maze (SMILE software Movement) Identify (SMILE software Properties of Number) Define (SMILE software Properties of Number) Darts (SMILE software Numeracy) Hopslide (SMILE software Mathematical Puzzles) Tadpoles (SMILE software Mathematical Puzzles) AddsUpTo (SMILE software Numeracy) Spirals (SMILE software Investigations) Avoid each other (SMILE Investigations	1882 1883 1889 1890 1891	Wedges 1 (DIME - Build-up PP) Wedges 2 (DIME - Build-up PP) Regular Tilings 1 (DIME - Regular Tilings Project) • Use A Triangles, B Convex Quadrilaterals, C Concave Quadrilaterals, E 2 Sizes of Squares. • For each activity do questions 1 - 3. Regular Tilings 2 (DIME - Regular Tilings Project) • Use F Polygons. • Do questions 1 - 4. Regular Tilings 3 (DIME- Regular Tilings Project) • Use D Pentagons. • Do questions 1 - 3. Line Symmetry B 1 - 3 (DIME- Line Symmetry Puzzles B PP5B) Line Symmetry B 4 - 6 (DIME- Line
1721 1728 1729 1730 1731 1732 1745 1746 1747 1755 1756 1767 1776	Angle 90° (SMILE software Angle Estimation) BoxD (SMILE software Sense of Number) Minimax (SMILE software Sense of Number) Wall (SMILE software Sense of Number) Rose (SMILE software Investigations) 3D Maze (SMILE software Movement) Identify (SMILE software Properties of Number) Define (SMILE software Properties of Number) Darts (SMILE software Numeracy) Hopslide (SMILE software Mathematical Puzzles) Tadpoles (SMILE software Mathematical Puzzles) AddsUpTo (SMILE software Numeracy) Spirals (SMILE software Investigations) Avoid each other (SMILE Investigations	1882 1883 1889 1890 1891 1892 1893	Wedges 1 (DIME - Build-up PP) Wedges 2 (DIME - Build-up PP) Regular Tilings 1 (DIME - Regular Tilings Project) • Use A Triangles, B Convex Quadrilaterals, C Concave Quadrilaterals, E 2 Sizes of Squares. • For each activity do questions 1 - 3. Regular Tilings 2 (DIME - Regular Tilings Project) • Use F Polygons. • Do questions 1 - 4. Regular Tilings 3 (DIME- Regular Tilings Project) • Use D Pentagons. • Do questions 1 - 3. Line Symmetry B 1 - 3 (DIME- Line Symmetry Puzzles B PP5B) Line Symmetry B 4 - 6 (DIME- Line Symmetry Puzzles B PP5B)
1721 1728 1729 1730 1731 1732 1745 1746 1747 1755 1767 1776 1777	Angle 90° (SMILE software Angle Estimation) BoxD (SMILE software Sense of Number) Minimax (SMILE software Sense of Number) Wall (SMILE software Sense of Number) Rose (SMILE software Investigations) 3D Maze (SMILE software Movement) Identify (SMILE software Properties of Number) Define (SMILE software Properties of Number) Darts (SMILE software Numeracy) Hopslide (SMILE software Mathematical Puzzles) Tadpoles (SMILE software Mathematical Puzzles) AddsUpTo (SMILE software Investigations) Avoid each other (SMILE Investigations) Students' HB Invest Pg 35) Jumping (SMILE software Mathematical Puzzles)	1882 1883 1889 1890 1891 1892 1893	Wedges 1 (DIME - Build-up PP) Wedges 2 (DIME - Build-up PP) Regular Tilings 1 (DIME - Regular Tilings Project) • Use A Triangles, B Convex Quadrilaterals, C Concave Quadrilaterals, E 2 Sizes of Squares. • For each activity do questions 1 - 3. Regular Tilings 2 (DIME - Regular Tilings Project) • Use F Polygons. • Do questions 1 - 4. Regular Tilings 3 (DIME- Regular Tilings Project) • Use D Pentagons. • Do questions 1 - 3. Line Symmetry B 1 - 3 (DIME- Line Symmetry Puzzles B PP5B) Line Symmetry B 4 - 6 (DIME- Line
1721 1728 1729 1730 1731 1732 1745 1746 1747 1755 1767 1776 1777	Angle 90° (SMILE software Angle Estimation) BoxD (SMILE software Sense of Number) Minimax (SMILE software Sense of Number) Wall (SMILE software Sense of Number) Rose (SMILE software Investigations) 3D Maze (SMILE software Movement) Identify (SMILE software Properties of Number) Define (SMILE software Properties of Number) Darts (SMILE software Numeracy) Hopslide (SMILE software Mathematical Puzzles) Tadpoles (SMILE software Mathematical Puzzles) AddsUpTo (SMILE software Investigations) Avoid each other (SMILE Investigations Students' HB Invest Pg 35) Jumping (SMILE software Mathematical Puzzles) Lineover (SMILE software Graphing)	1882 1883 1889 1890 1891 1892 1893 1894	Wedges 1 (DIME - Build-up PP) Wedges 2 (DIME - Build-up PP) Regular Tilings 1 (DIME - Regular Tilings Project) • Use A Triangles, B Convex Quadrilaterals, C Concave Quadrilaterals, E 2 Sizes of Squares. • For each activity do questions 1 - 3. Regular Tilings 2 (DIME - Regular Tilings Project) • Use F Polygons. • Do questions 1 - 4. Regular Tilings 3 (DIME- Regular Tilings Project) • Use D Pentagons. • Do questions 1 - 3. Line Symmetry B 1 - 3 (DIME- Line Symmetry Puzzles B PP5B) Line Symmetry B 4 - 6 (DIME- Line Symmetry Puzzles B PP5B) Line Symmetry B 7 - 10 (DIME- Line

1903	Numbers (SMILE software Properties of Number)	2119	Patterns (SMILE 1783 Calculating: Pages 12 & 13)
1908	Pattern Pack A (DIME - Pattern Pack A PP6A)	2120	Productive (SMILE 1783 Calculating: Page 14)
1909	Pattern Pack B (DIME - Pattern Pack B PP6B)	2121	Hot and Cold (SMILE 1783 Calculating: Page 15)
1920	Pattern Spotting (SMILE Properties of	2122	Target 200 (SMILE 1783 Calculating: Page 16)
	Number Students' HB Pg 16)	2123	Missing Signs (SMILE 1783 Calculating: Page 17)
1936	Many Grids (SMILE Properties of	2124	Date of Birth (SMILE 1783 Calculating: Pg18 /19)
	NumberStudents' HB Pg 28)	2125	Escape (SMILE 1783 Calculating: Pages 20 & 21)
1950	Diagonal Multiples (Students' HB Properties	2126	Problems (SMILE 1783 Calculating: Pages 22 & 23)
	of Number Pg 29)	2194	Tossing Coins (SMILE Investigations Students' HB
	One Million (TARQUIN Poster)		Pg 38 /40)
	Curve Stitching (TARQUIN Poster)	2202	Visiting Every Point (SMILE Investigations
	One Dice (DIME - Probability Pack A)		Students' HB Investi. Pg 8)
	Numbers Up (DIME - Probability Pack A)	2284	BoxN (SMILE software Sense of Number)
	Two Dice (DIME - Probability Pack A)	2285	GuessN (SMILE software Sense of Number)
	Five Beads (DIME - Probability Pack B)	2286	Quadrants and Squares (DIME - Algebra
	Seven Beads (DIME - Probability Pack B)		through Geometry)
	Curves of Pursuit (TARQUIN Poster)		Worksheets A3, A4
	Three Counters (DIME - Probability Pack A)	2287	Add and Subtract Squares and
	Six Beads (DIME - Probability Pack B)		Quadrants (DIME - Algebra through Geometry)
	Four Beads (DIME - Probability Pack B)		Worksheets A5, A6
	Tessellation Poster (TARQUIN Poster)	2288	Algebra Tak-Tiles on a Grid (DIME-
2014	Probably Probable? (Students' HB		Algebra through Geometry) Worksheets B1, B2, B3, B4, B5, B6
	Investigations Pg 43)	2289	
2073	Tricubes (DIME - Tricube Puzzles Project)	LLUJ	- Algebra through Geometry)
	Worksheets A1, A2, A3, A4		 Worksheets C1, C2, C4, C5, C6
2074	Building with Tricubes (DIME - Tricube Puzzles Project)	2290	A New Unit of Area (DIME-Algebra through Geometry)
	Worksheets B2, B6, B10		 Worksheets D1, D2, D3, D4, D5, D6
2075	Tricube Plans (DIME - Tricube Puzzles Project)	2291	Comparing Areas (DIME-Algebra through
	Worksheets C1, C5, C6, C8		Geometry)
2076	Building on a Square (DIME - Tricube Puzzles Project)	0000	Worksheets E1, E3, E4) Henci (2011) 5 (2011) 6 (201
	Worksheets D1, D5, D8, D10		Hanoi (SMILE software Mathematical Puzzles)
2077	Making a 3 x 3 x 3 Cube (DIME - Tricube		Hats (SMILE software Mathematical Puzzles)
	Puzzles Project)		Queens (SMILE software Movement)
	Worksheets E3, E7, E10		TenSprint (SMILE software Numeracy)
2086	Circles to Polygons (SMILE Investigations	2378	Matching Fractions (SMILE software Numeracy)
2004	Students' HB Pg 10)	2379	Ordering Fractions (SMILE software Numeracy)
	Squares (SMILE Investigations Students' HB Pg 4)	2380	NumberLines (SMILE software Numeracy)
	Mystery (SMILE 1783 Calculating: Page 3)	2381	NumberLinesD (SMILE software Numeracy)
	2 Puzzles (SMILE 1783 Calculating: Page 5)	2393	Equivalent Pair (SMILE software Enriching Number)
2115	Missing Digit (SMILE 1783 Calculating: Page 8)		Make that Number (SMILE software Enrich No)
	Operations (SMILE 1783 Calculating: Page 9)		Maximum Remainder (SMILE software EnrichNo)
	Rumour (SMILE 1783 Calculating: Page 10)		FindTheLine (SMILE software Graphing)
2118	Ticket Sales (SMILE 1783 Calculating: Page 11)	2397	Guess Inequality (SMILE software Graphing)

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Abbreviations used, in alphabetical order.

		_
Abbr	AT	Flow
3-D	AT3	3-D
A&P	AT3	Area and Perimeter
Add	AT2	Addition
AlDa	AT4	Analysing and Interpreting Data
Alg	AT2	Algebraic Structure
Ang	AT3	Angle
APr	AT3	Angle Properties
CDa	AT4	Collecting Data
CiM	AT3	Circle Measurement
Coo	AT3	Coordinates
CTr	AT3	Combined Transformations
DDa	AT4	Displaying Data
Dec	AT2	Decimals
Div	AT2	Division
DNo	AT2	Directed Number
Dra	AT3	Drawing
Equ	AT2	Equations
Fra	AT2	Fractions
Gra	AT2	Graphs
L&S	AT4	Logic and Sets
Map	AT2	Mappings
Mea	AT3	Measurement
Mix	AT2	Mixed
Mul	AT2	Multiplication
Or/R	AT2	Ordering and Rounding
O.R.		Other Resources
P&R	AT2	Powers and Roots
PaG	AT2	Patterns and Generalisations
Per	AT2	Percentages
PNo	AT2	Properties of Number
Pro	AT4	Probability
PSh	AT3	Properties of Shape
PV/N	AT2	Place Value/Number Systems
Rat	AT2	Ratio
Ref	AT3	Reflection
ReP.		Resource Programs
Rot	AT3	Rotation
S/En	AT3	Similarity/Enlargement
SAV	AT3	Surface Area/Volume
Seq	AT2	Sequences
Sha	AT3	Shape
Sub	AT2	Subtraction
Тор	AT3	Topology
Tr/V	AT3	Translation/Vectors
Trig	AT3	Trigonometry
UGr	AT2	Using Graphs

Other Abbreviations (lower case)

Any activity with abbreviations in lower case indicates that the activity is a SMILE activity.

w/s	denotes worksheet
(box)	SMILE activities that are not usually stored with the Workcards or Worksheets. Written in lower case letters in brackets. e.g. (poster)
(Calculating)	Activities which can be found in SMILE 1783 Calculating Booklet with page number of

Other Abbreviations (UPPER CASE)

activity.

Any activity with abbreviations in upper case indicates that the activity is a Commercial Reference and not included when you purchase SMILE materials.

(ANGLE)	SMILE software 'Angle Estimation'
(COORD)	SMILE software 'Coordinates'
(DIEE)	Software from DfEE
(DIME)	Activities from Tarquin Publications
(ENRICH)	SMILE software 'Enriching Number'
(GRAPH)	SMILE software 'Graphing'
(INVEST)	SMILE software 'Investigations'
(MA Poster)	Poster from The Mathematics Association
(MATH PUZ)	SMILE software 'Mathematical Puzzles'
(MOVE)	SMILE software 'Movement'
(NUM)	SMILE software 'Numeracy'
(PROP/NO)	SMILE software 'Properties of Number'
(PROP/NO Pgx	Page number from the Student's Handboo
	which can be downloaded from the CD
	'Properties of Number'
(SENSE/NO)	SMILE software 'Sense of Number'

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0007	Tangram 3	АТЗ	Sha	5	0177	7 Shearing a Triangle	АТЗ	A&P	6
8000	Prisms & Pyramids	ETA	Dra	4	0178		AT3	A&P	3
0022	Area 1	AT3	A&P	3	0179	Four 4's	AT2	Mix	8
0023	Area 2	AT3	A&P	4	0181	Alf Mike or Leena	AT2	Map	5
0024	Area 3	AT3	A&P	3	0182		AT2	Gra	6
0025	Area 4	AT3	A&P	4	0183 0184		AT2 AT2	Gra Equ	6 6
0027	Number Squares w/s	AT2	Equ	1/2	0185		AT3	A&P	4
0028	Number Squares 2 w/s	AT2	Equ	1/2		•			
0000	Number Courses Audo	ATO		•	0187		AT2	Map	6
0030 0031	Number Squares 4 w/s Find the Number 1 w/s	AT2 AT2	Add Equ	3 1/2	0188		AT3 AT3	Trig Trig	6 7
					0190		AT3	Trig	7
0033	Find the Number 3 w/s	AT2	Equ	3	0191	Pythagoras Problems	AT3	Trig	7
0034 0035	Find the Number 4 w/s Squares and Triangles	AT2 AT3	Equ Sha	4 3					
0000	oquaroo uno mangro		-	·					
0039	About Angles	AT3	APr	5	0044	Description Discretes	AT0	D	_
0040	Equilateral Triangle	AT3	Sha	4	0211 0212	· · · · · · · ·	AT3 AT3	Dra Dra	5 5
0046	Domino	AT3	S/En	5	0213		AT3	Dra	6
					0214		AT3	Mea	1/2
0048	Tetromino	AT3	CTr	4	0215	Drawing the Line	AT2	Gra	6
0050	Dissection 1	AT3	Sha	3	0220	Triangle Numbers 1	AT2	P&R	4
0051	Dissection 2	AT3	Sha	4	0221	Triangle Numbers 2	AT2	PNo	5
0052	Dissection 3	AT3	Sha	4					_
0053	Dissection 4	AT3	Sha	4	0224	Area of a Parallelogram	ETA	A&P	6
0054 0057	Dissection 5 Fractions 3 w/s	AT3 AT2	Sha Fra	5 4	0226	Shearing Parallelograms	АТ3	A&P	6
0058	Fractions 4 w/s	AT2	Fra	4	0227		AT3	A&P	6
					0228	•	AT3	A&P	6
0066	Napier's Rods	AT2	Mul	4	0230	Square Pegs in Round Holes	AT2	P&R	5
0068	Accurate Measuring	АТ3	Mea	4	0230	Square regs in Hourid Holes	AIZ	ran	5
0069	Cardioid w/s	AT2	Seq	4	0232	! Inscribed Circle	AT3	Dra	6
0070	Isometric Drawing	AT3	3-D	4	0233	Rectangle Patterns	AT2	PNo	3
0071	Envelopes	AT3	Dra	3					_
0072	Angles of a Quadrilateral	AT3	APr	5	0235		AT3	APr	5
0073 0074	Time/Distance Graph Sum & Product w/s	AT2 AT2	UGr Mix	5 3	0236	Triangle Problems	AT3	A&P	6
0074	Networks	AT3	Top	5	0240	Odds and Evens Tables	AT2	PNo	5
			·		0241		AT2	Map	1/2
0085	Calculator Problems	AT2	Add	3	0242	Cracking the Code w/s	AT2	Мар	3
0090	More Calculator Problems	AT2	Mul	5	0244	More Sorting	AT4	L&S	1/2
					0245	Venn Diagrams	AT4	L&S	3
0092	Harder Calculator Problems	AT2	Mix	5	0040	Making Ten	AT2	Add	1/0
0098	Plaited Cube w/s	АТ3	3-D	6	0248 0249	•	AT2	Add	1/2 1/2
0099	Sum & Product Again w/s	AT2	Mix	3	0250	• •	AT2	Or/R	3
	-				0251	Mirror Symmetry w/s	AT3	Ref	3
					0255	Points and their Images	АТ3	Ref	6
					0233	Folitis and then images	Α10	1101	Ü
0104	Number Puzzle 1	AT2	Add	4	0257	, ,	AT2	Seq	5
0105	7 Piece Tangram	AT3	Sha	5	0258	, ,	AT2 AT2	Seq	5
0114	Nines w/s	AT2	PaG	3	0259	Shading Fractions w/s	AIZ	Fra	3
0115	Columns	AT2	PaG	1/2	0261	Co-ordinates 1	AT3	Coo	3
					0262	-	AT3	Coo	4
0119	Area and Perimeter	AT3	A&P	5	0263		AT3	Coo	4
0120 0121	Chocolate Areas 100 Square Patterns w/s	AT3 AT2	A&P PaG	6 1/2	0264 0265		AT3 AT2	Coo PNo	4 1/2
0121	100 Square Fatterns W/S	712	1 20	1/2	0203	Odd and Even	712	1740	1/2
0123	Counter Puzzle	AT4	L&S	4	0267		AT3	APr	5
0131	Matchstick Puzzles	ETA	PSh	4	0268 0269		AT3 AT3	APr APr	5 6
0131	Watchstick F uzzles	713	1 311	•	0203	Tilluling Exterior Angles	710	A' '	Ü
0133	Out of Line	AT3	L&S	4	0272		AT4	CDa	3
0142	Valumas of subse	АТЗ	SAV	6	0273	How Much Longer?	AT3	Mea	4
0142	Volumes of cubes Volumes 2	AT3	SAV	-	0281	Angles: The Compass	АТ3	Rot	3
0144	All out of Line	AT3	Tr/V	6	0201	Angles. The Compass	,,,,	,,,,,	Ū
0145	Tetraflexagon	AT3	3-D	6	0284	Angles from Tessellations	AT3	APr	6
0151	More 100 Square Patterns	AT2	PaG	1/2	0286	Right-angles	АТ3	Ang	3
0,01	Wore 100 equate 1 allotto	A12		"-	0200	Thight diffg.03	7110	/g	Ū
0153	Decimal Calculations	AT2	Dec	7	0288	Rolling Two Dice w/s	AT4	Pro	4
0155	Calculator Trial and Error	AT2	Mix	7	0290	Experiments	AT4	Pro	4
0,00	Calculator marana Eno	7.12	14112	,	0291	•	AT4	L&S	4
0159	Angles of a Triangle	AT3	APr	4	0292	Doubling Patterns w/s	AT2	PaG	4
0161	The Three Coin Problem	AT4	Pro	6	0294	Measuring Lengths	АТЗ	Mea	3
0162	2, 3, 4, 5	AT2	Mix	7	0295	3 3	AT3	Dra	4
								_::	
0164	Patterns with 11 and 13	AT2	Div	4	0297	Ţ.	AT2	PNo	3
0165 0166	Cyclic Quadrilateral Area of a Triangle	AT3 AT3	APr A&P	7 5	0298 0299	•	AT2 AT2	P&R P&R	4 5
0167	x for Breakfast	AT2	Мар	5	1 3239	. In co cquared	, <u>~</u>	, an	9
0168		AT3	A&P	5					
	Half a Rectangle	AT3	A&P	5					
0170	Hex	AT4	L&S	6					
0171	TV Drinks	AT2	Мар	3					
0172	A Match for Anyone	AT2	Map	4	1				

Map Мар

Мар

AT2

AT2

0172 A Match for Anyone

0173 Mapping Machines

0307 0308	Factors Prime Numbers	AT2 AT2	PNo PNo	4 5	0432 0433	Moving Pictures Acute/Obtuse	AT3 AT3	CTr APr	5 6	0616 0617	The Unknown Square Looking Around w/s	AT2 AT3	Alg 3-D	7 1/2
0310 0311	Common Factors Factor Finder	AT2 AT2	PNo PNo	5 · 5	0437	Chess	AT2	PaG	5	0629	Time Tiles	ЕТА	Mea	4
					0439	Rectangle Diagonal	AT2	PaG	7	0634	Sidings	AT4	Pro	6
0313 0314	Spots in Sequences Dots in Sequences	AT2 AT2	Seq Seq	, 3 5	0443	Who Won?	AT2	Fra	6	0674	A Hungry Death?	AT4	L&S	5
0315 0316	Staircases Counting On w/s	AT2 AT2	Seq Seq	6 3	0448	Favourite Colours w/s	AT4	DDa	1/2	0675	Cube Cuts	АТЗ	CTr	7
0317	Sequences of Numbers	AT2	Seq	4	0446					0677	Logic Maps	AT4	L&S	5
0320	Turning Patterns	АТ3	Rot	3	0450	Trick or Treat	AT2	Seq	6	0683	Fraction Sort	AT2	Fra	6
	-				0452	Inside or Outside?	AT3	Тор	5	0684	Forty Towers	AT4	Pro	7
0322 0323	Cutting up Rectangles Metre and Centimetre	AT3 AT3	Sha Mea	1/2 3	0453 0454	What Can I Wear? Post Box	AT4 AT3	Pro Trig	5 EP	0689	Random Code	AT2	Equ	6
0324	Rotations	AT3	Rot	3	0455 0456	Midpoints Midpoint Sequences w/s	AT3 AT3	PSh Dra	5 3	0691	And now Swahili	AT2	Equ	5
0326	Tessellations of Quadrilaterals	АТЗ	Sha	6	0457	Number Pictures	AT2	Add	1/2				,	
0327	Centres of Rotation w/s	AT3	Rot	5	0458 0459	Adding Numbers Adding Shapes	AT2 AT2	Add Add	1/2 1/2	0694 0695	Which Switches? Locate the Error	AT4 AT3	Pro CTr	5 4
0330	Multiple Patterns	AT2	PNo	5	0460	Carry on Adding	AT2	Add	3	0696	Number Codex	AT2 AT3	Equ PSh	6 5
0331	Prime Factors	AT2	PNo	6	0461	Venus Clock	AT2	Alg	4	0697	Hidden Shapes w/s	AIS	1 311	3
0333 0334	Equivalent Fractions Egyptian Numbers	AT2 AT2	Fra PV/N	4 3	0463 0464	Paper Power Subtracting	AT2 AT2	P&R Sub	7 1/2					
	-				0465	Subtraction	AT2	Sub	3		00 1	470	N 41	•
0338 0339	Summing the Odds Vector Messages	AT2 AT3	PNo Tr/V	5 4	0467	Subtract	AT2	Sub	1/2	0705	Cross Puzzles w/s	AT2	Mix	3
0340	Is it Rigid?	AT3	PSh To-	6	0.470	Nambraid w/a	ATO	Con	-	0709	Reflection	AT3	Ref	5
0341 0342	Nodes w/s About Nodes	AT3 AT3	Тор Тор	5 7	0470 0471	Nephroid w/s Border Patterns	AT2 AT3	Seq Tr/V	5 1/2	0713	Jumping Jack w/s	AT2	Seq	1/2
0344	Counter Hopping Puzzle	AT2	PaG	7	0472	Sort the Cards	AT4	L&S	6	0719	Cuboid Nets	АТЗ	Dra	6
0044					0474	Triominoes	AT2	PNo	4	0720	Nets of Pyramids	AT3	Dra	7
0346	Sequences in Squares w/s	AT2	Seq	4	0475 0476	All Change Mapping w/s	AT4 AT2	L&S Map	4 5	0721 0722	Squares Tangram Prove It	AT3 AT2	Sha Alg	5 EP
0348	Tangram Teasers	AT3	Sha	5	0477	Shunting	AT4 AT3	L&S CTr	8 1/2	0725	Race Track w/s	АТЗ	Tr/V	6
0349	Tetrahedron Nets	АТЗ	Dra	4	0478	Patterns with Squares								
0352 0353	Table Squares w/s Bowling Tom	AT2 AT2	Seq Add	4 1/2	0481	Where's that Town?	АТ3	Coo	5	0727	Who's Who?	AT4	L&S	5
0354	Tom the Bowling Champ w/s	AT2	Add	3	0483	Star Puzzle	AT2	PaG	5	0730	Rotation w/s	AT3	Rot APr	5 8
0355	Bowling Tom's Problem	AT2	Add	3	0484 0485	Octahedron Nets Pamphlets	AT3 AT2	Dra Equ	5 8	0731 0732	Regular Polygons Ruler, Pencil, Compass	AT3 AT3	Dra	5
0359	How Many Colours? w/s	АТЗ	Top	4	0489	Underground	AT2	Mix	4	0734	Start with a ²	AT2	Alg	8
0362	No Brakes Bruce	AT2	UGr	6		•				0735	Knots w/s	AT2	Mul	3
0364	Using a Triangle	АТ3	PSh	6	0492 0493	The Inseparables Sam Shape w/s	AT3 AT3	Top PSh	7 1/2	0736 0737	Solving Equations What Chance?	AT2 AT4	Equ Pro	6
0365 0366	A Million 2-Piece Square	AT2 AT3	Mix PSh	5 4	0494 0495	All Co-ordinates Routey	ETA STA	Coo Top	5 5	0738	Family of Quadrilaterals	AT3	PSh	8
0367	Fraction Wall w/s	AT2	Fra	5	0496	Junior Contig	AT2	Mix	4	0740	Solve it	AT2	Equ	6
0376	A Hundred	AT2	PV/N	4						0741	The 38th Triangle Number	AT2	Alg	EP
0377	Vector Sea	AT3	Tr/V	4						0743 0744	Solving by Graphs Equations and Graphs	AT2 AT2	Gra Gra	7 7
0381	Cuboids from Matchboxes	АТЗ	SAV	6	0510	Radar w/s	AT3	Ang	5	0745	Inverses	AT2	Мар	7
0383	Building Shapes w/s	AT2	Seq	5	0516	Adding Directed Numbers	AT2	DNo	6	0746	Pascal's Triangle	AT4	Pro	7
0384	Changing Grids w/s	AT3	Coo	4	0517	Subtracting Directed Numbers	AT2	DNo	7	0748 0749	The Times Crossword	AT2 AT2	PNo Mix	7 5
0386	Think of a Number	AT2	Мар	4	0518	(Do it first)	AT2	Mix	5	0750	Three Numbers Monopoly	AT4	Pro	6
0388	Power	AT2	P&R	6	0528	Multiplying	AT2	Mul	4	0752	Repeating Digits	AT2	Div	6
					0549	Marbles	AT2	DNo	5				Gra	8
0390	Surfaces w/s	AT4	L&S	3	0550	Adding Shifts w/s	AT2	DNo	5	0755 0756	Rectangles to Regions Points of Intersection	AT2 AT2	Gra Equ	EP
0392	Circumference	AT3	CiM	5	0557	A Special Number	AT2	PV/N	EP	0757 0758	Centigrade and Fahrenheit Odd One Out	AT2 AT2	Equ Div	7 5
0394	Concentric Circles	AT3	Dra	4	0560	Symmetrical Cross Cut	AT3	Ref	6			AT2	Div	6
0396	Hexagons w/s	AT2	Fra	4	0563	Digit Sum	AT2	Seq	8	0760 0761	Quickly to Zero Orbits	AT3	CiM	7
0397 0398	Operations 4 + 3 x 2	AT2 AT2	Alg Mix	8 5	0574	Line of Best Fit	AT4	DDa	7	0772	Angle Estimation	AT3	Ang	5
0399	Cubes	AT3	SAV	8										
					0577	Reflect w/s	AT3	Ref	6	0775 0776	Measuring Angles Drawing Angles	AT3 AT3	Ang Ang	4
					0579	Two Loops	AT4	L&S	3	0777 0778	Satelite Signals w/s Tangrams (MA poster)	AT3 AT3	Ang Sha	5 5
0400	Folding Symmetry	АТ3	Ref	1/2	0581	Using a Mirror (DIME)	AT3	Ref	6					
0402	Adding Fractions	AT2	Fra	6	0585	Three Loops	AT4	L&S	4	0780 0781	Long Mult. Revision The Inverse	AT2 AT2	Mul Map	5 5
0404	Solids w/s	АТЗ	3-D	3	0590	Less Marks are Best!	АТЗ	Mea	7	0782 0783	Number Pattern Proof Cubes from Triangles	AT2 AT2	PaG PaG	EP 7
					0591	Counter Placing	AT4	L&S	6	0784	142857 Times Table	AT2	PaG	6
0406	Two Folds	AT3	Ref	1/2	0592	Powerful Rules	AT2	P&R	7	0788	Free Hand Angles	АТЗ	Ang	5
0411	Hexagon Dissection	AT3	Sha	5	0595	Best Fitting Peg	AT3	SAV	EP	0789	Gradient	AT2	Gra	8
0414	Bi-Fractions	AT2	PV/N	EP	0597	Sunita's Day	АТЗ	Mea	3	0791	A Millionaire	AT2	Rat	7
0423	Clock Arithmetic	AT2	PV/N	3						0792 0793	Wage Bargaining Approximation and π	AT2 AT3	Per CiM	5 EP
0424	How Many Routes? w/s	AT3	Тор	4						0794	The Trapezium	AT3	A&P	7
0426	Traversable?	АТЗ	Тор	6	0600	In your Mind	AT4	L&S	7		Darts Probability		CiM	
0428	One Difference Logichains	AT4	L&S	3	0603	Numbering the Pages	AT2	PaG	6	0797	Matrices and Transformations	AT3	CTr	8
	Squaring Parallel Lines	AT2 AT2	P&R Gra	5 6	0614	Powers of Ten w/s	AT2	P&R	7					
2,30				-	1					1				

0800	Polygons: Interior Angles	AT3	APr	6	1013	Vector Magnitudes	AT3	Tr/V	8	1320	Rectangle Areas	AT3	A&P	6
										1321	Prism or Pyramid? w/s	AT3	3-D	4
0804	Inflation	AT2	Per	8	1028	Isometries	AT3	CTr	EP	1322	Solid Shapes	AT3	3-D	3
0805 0806	Average Pack of Workcards Trapezium to Parallelogram	AT4 AT3	AIDa A&P	7 7						1323 1324	Tak Tile Areas Pegboard Sums	AT2 AT2	Alg Add	EP 1/2
0000	Trapezium to Laranciogram	AIU	Adi	·	1081	Puzzles	AT2	Equ	5	1024	r egboard coms	AIL	Add	.,_
0808	Code Breaking	AT4	AlDa	, 5				•		1328	Room to Move	AT3	Mea	5
0809	Fold It	AT3	APr	5	1094	Volume of Prisms	AT3	SAV	7	1329	Journeys	AT3	Tr/V	7
0040	Luna de Anna Anna de Cara	470			1095	Percentages w/s	AT2	Per	5	4004	Facel Assis (DIME)	470	4.0-	-
0812 0813	Irregular Areas Sectors of Circles	AT3 AT3	A&P CiM	8 EP	1096 1097	Marks to Percentages w/s Fractions to Percentages	AT2 AT2	Per Per	6	1331 1332	Equal Angles (DIME) Rotation (DIME)	AT3 AT3	APr Ang	5 6
0010	decidis of Officies	710	Cilvi	-	1037	Tractions to referriages	712	1 61		1333	Directions (DIME)	AT3	Ang	8
0817	Straight Line Graphs	AT2	Gra	7						1334	Recognising Solids (DIME)	AT3	3-D	5
0818	Differences Between Squares	AT2	Alg	7						1335	Sketching Solids (DIME)	AT3	3-D	6
0819	Prove Your Identity	AT2	Alg	EP	4404	Bio Ohada	AT4	DD-		1336	Turning and Toppling (DIME)	AT3	CTr	6
0820	Equations from Squares	AT2	Alg	EP	1101	Pie Charts	AT4	DDa	6	1337 1338	Reflections (DIME) Wedges (DIME)	AT3 AT3	Ref CTr	7 8
0824	Golden Rectangle	AT2	Rat	8	1112	Rotation	AT3	Rot	6	1339	Flags (DIME)	AT2	Мар	5
	3									1340	Pattern and Notation (DIME)	AT2	Equ	7
0827	Clover Leaf	AT3	CiM	EP	1115	Graphs	AT4	UGr	5	1341	Number Machines (DIME)	AT2	Map	6
0830	Re-Grouping	AT2	Alg	6	1123	Translation	АТЗ	Tr/V	6	1342 1343	Mappings and Graphs (DIME) Simple Mappings (DIME)	AT2 AT2	Gra Map	7 6
0831	Primes and Proof	AT2	PNo	EP		Transation.	,,,,	•.,, •		1344	Further Mappings (DIME)	AT2	Мар	7
0832	Short Division	AT2	Div	3	1127	Time-Distance Graphs	AT2	UGr	7	1345	Mastermind	AT4	L&S	8
0833	Short Division-Carrying	AT2	Div	4	1100	1	470	.	_	1010	Last and Owner	470		•
0834	Dividing Strips	AT2	Div	3	1130	Journeys	AT3	Ang	7	1348 1349	Look and Guess Time Line	AT3 AT3	Mea Mea	3 1/2
0837	Inverse Mappings	AT2	Мар	7	1132	What's the Probability?	AT4	Pro	5	1040	Time Line	, o	Wica	.,
0838	Scale Factor	AT3	S/En	6		•				1352	Wheels	AT3	Rot	5
0839	Rotate this way w/s	АТ3	Rot	6	1136	Solving Equations	AT2	Equ	7	1353	A Number of Things	AT2	Mix	3
0843	Very Large Numbers	AT2	P&R	8	1137	Solving Harder Equations	AT2	Equ	8	1354 1355	Euler Solids (MA Poster) Halves and Quarters w/s	AT3 AT2	3-D Fra	7 1/2
0844	Very Small Numbers	AT2	P&R	8	1156	Transformations	AT3	CTr	8	1356	How Much?	AT2	Add	1/2
0845	Negative Scale Factor	AT3	S/En	8						1357	Missing Signs	AT2	Mix	4
				_	1170	Compass Constructions	AT3	Dra	6	1358	Joining Multiples w/s	AT2	PNo	1/2
0849	Anywhere on the Number Line w/s		Alg	6 5	1177	Vactors	ΛTO	Tr/V	EP	1359	Joining Odds and Evens w/s	AT2 AT2	PNo PNo	1/2 3
0850 0851	Multiplication Problem? Tile Patterns	AT2 AT3	Mul Sha	1/2	1177 1178	Vectors More Vectors	AT3 AT3	Tr/V	EP	1360 1361	Pictures from Multiples w/s Three in Line	AT2	Add	3
0852		AT4	Pro	1/2	1179	Column Vectors	AT3	Tr/V	EP	,,,,,	711100 111 2.110		,,,,,	•
0853	Grids	AT3	Coo	4						1365	Number Snap	AT2	Mul	3
0854	Perimeter	AT3	A&P	3						1366	Pairs	AT2	Mul	1/2
0855	How Long?	AT3	Mea	3						1367	Lines	AT2	PNo	3
0857	It's Raining	AT4	AlDa	1/2	1202	Significant Figures	AT2	Or/R	7	1369	Infinity	AT2	Seq	EP
								_						
	Triangle Pairs	AT3	PSh	3	1208	Percentage Sales	AT2	Per	7		Jobs in Order	AT4	L&S	1/2
0861	The Same Area Triangle Spirals	AT3 AT2	A&P Seq	4	1233	Frequency Graphs	AT4	AlDa	6	1377 1378	Mappings	AT3 AT2	3-D Map	6
0862	Square Spirals	AT2	Seq	3		responsy anapire		,		1379	Fishing w/s	AT3	Coo	4
0863	Deal the Cards	AT2	Div	3	1257	Volume of Cuboids	AT3	SAV	7					
0864	People in Villages	AT4	DDa	3	1258	The Biggest Vase	AT3	SAV	8	1381	Money	AT2	Mix	1/2
0866	Sharing Counters	AT2	Div	3	1259	Lengths of Similar Objects	AT3	S/En	8	1382 1383	Paper Folding Good Guesswork	AT3 AT3	PSh Mea	6 4
0867	Dividing Counters	AT2	Div	3	1261	Similar Solids	AT3	S/En	EP	1384	Diagonals	AT3	PSh	3
0868	Evens w/s	AT2	PNo	1/2						1385	Times Square	AT2	Mul	1/2
0869	Puzzle w/s	AT2	Mix	1/2	1267	Cum. Freq. from Grouped Data	AT4	AlDa	8				- 15	_
0870	Find the Stranger	AT4	L&S	4	1269	Probability	AT4	Pro	7	1388 1389	Double-Up Converging Sequences	AT3 AT2	S/En PaG	5 EP
0872	How Heavy?	AT3	Mea	3	1203	Tobability	717	110	'	1390	Multiplication Facts w/s	AT2	Mul	4
	·				1272	Comb Probs from Tree Diagrams	AT4	Pro	EP		·			
0876	Identities	AT2	Alg	7	4075	Valued Ouders Asset of Outerdann	470	044	_	1394	Turn the Tables	AT2	PNo	6
0877	Angle 4 Review	AT3	APr	6	1275	Vol and Surface Area of Cylinders	A13	SAV	7	1395 1396	Multiplication Table Patterns Two Digit Sums	AT2 AT2	PNo Alg	6 EP
0881	24 Squares w/s	AT2	Div	3	1278	Multiplying Directed Numbers.	AT2	DNo	7	1030	Two bight during	AIL	Aig	L'
0882	Lies, Damned Lies & Statistics	AT4	AlDa	EP	1279	Dividing Directed Numbers	AT2	DNo	7	1398	Trigg	AT3	Tr/V	6
										1399	Babylonian Method	AT2	PV/N	EP
0884 0885	Positive or Negative? Number Noughts & Crosses	AT2 AT2	DNo Add	6 3	1281	Using Gradients	AT2	UGr	EP					
0005	Number Noughts & Crosses	AIZ	Auu	١ ١	1287	Equilateral Construction	AT3	Dra	5					
0889	Old Oak	AT2	UGr	4										
000 1	Fares Mark	AT	T-41		1292	Sampling Shoes	AT4	CDa	5	1400	A Transformation Technique	АТЗ	CTr	EP
0894 0895	Force Meet	AT3 AT2	Tr/V Mul	8 3	1294	Cooking Numbers	AT2	Rat	5	1404	Action Equations	AT2	Equ	4
0895	Jumps w/s How Thick?	AT3	Mea	6	1294	Second-hand Cars	AT4	DDa	6	1404	Jump Equations	AT2	Equ	4
0897	Statistics 3 Review	AT4	AlDa	5						1406	Equality and Inequality	AT2	Equ	5
					1299	Tangram Arrows w/s	ETA	Sha	4					
0899	Time Bingo	AT3	Mea	1/2							Thermometer Readings The Mean	AT3	Mea AlDa	4
										1409	тпе меап	AT4	AlDa	4
										1411	Roman Numerals	AT2	PV/N	5
											Algebra Puzzle	AT2	Мар	7
0900	24 Hour Bingo	AT3	Mea	3	1300	Measuring Windows	AT2	Dec	5	1413	Twelve Inch Perimeter	AT3	A&P	4
0903	Millions	AT2	Mix	6	1301 1302	Three in a Line Logi Puzzle	AT4 AT4	L&S L&S	6	1415	Simple Quadratics	AT2	Equ	8
0904	Carry on Subtracting	AT2	Sub	3	,502	gr , seele	¬	-40	<u> </u>	1-713	ipio esadranos		-44	3
0905	Domino Puzzle	AT4	L&S	7	1304	An Honourable Problem	AT4	L&S	4	1417	Tens	AT2	Add	1/2
0906	Tak Tiles A (DIME)	AT3	Sha	1/2	1305	Factorials!	AT2	Mix	EP	1418	Series Geometrically	AT2	Seq	EP
0907 0908	Tak Tiles B (DIME) Tak Tiles C (DIME)	AT3 AT3	Sha Sha	1/2 1/2	1306 1307	Decimal Estimation Sections	AT2 AT2	Div PaG	5 5	1419 1420	Versa-Tiles Perpendicular Proof	AT3 AT2	APr Alg	6 EP
0909	Tak Tiles D (DIME)	AT3	Sha	3	1307	Problems	AT2	Equ	8	1720	, Diponaloular i 1001	, 11 &	, wg	
	· · ·		,		1309	More Vector Messages w/s	AT3	Tr/V	5		Rectangles in Circles	AT3	PSh	4
0982	Letters for Lengths	AT2	Equ	7	4040	Motobatials Conserve	AT-	C	,	1423	Calculator Guesses	AT2	Or/R	3
					1312 1313	Matchstick Sequences Match Patterns	AT2 AT2	Seq Seq	3 6	1424	Dividing by Guessing	AT2	Div	5
					.515	THE STATE OF THE S	, 116	Juq	Ĭ	1426	Decimal Lines	AT2	Dec	4
						International Paper Sizes	AT2	Rat	7		Triangles in Circles	AT3	PSh	4
1007				o 1	1016	Halving	AT2	Or/R	5					
	Cumulative Frequency and Q'tiles	AT4	AlDa	°		•				1400	Multiples of 2 and 0	ATO	Disc	_
1011	Cumulative Frequency and Q'tiles Dividing in a Given Ratio			e		Mult & Div by 10, 100 & 1000 w/s		Dec	5		Multiples of 3 and 9 Bounce	AT2 AT2	Div Mix	5 1/2
1011	, ,	AT3			1317	•						AT2 AT2	Div Mix	

1432 1433 1434 1435 1436 1437 1438 1439 1454 1456 1457 1458 1459 1460 1461 1462 1463	Triangle Patterns Base -2 Bearings and Scale Drawing Back Bearings Block Problems Four Consecutive Numbers Patterns in Pascal's Triangle Geometric Progressions ISBN's and Errors Matrices for Rotations Combining Rotations Reflection Matrices Investigation Matrices for Shears Investigation Diophantine Equations Figures for Words Missing Keys	AT2 AT3 AT3 AT3 AT2 AT2 AT2 AT2 AT3 AT3 AT3 AT3 AT2 AT2	Seq 6 PV/N EP Ang 6 Ang 7 SA/V 4 Alg EP PaG '7 PaG EP Div 6 Rot EP Rot EP Rot EP CTr EP Equ EP PV/N 4 Mix 4 Mix 6
1482	Using brackets w/s Tricky Sum (MA Poster)	AT2	PaG 6
1484 1485 1486 1487 1488	Decimal Patterns Limits Threes and Sevens Thinking in Three Dimensions Angles between Planes	AT2 AT2 AT2 AT3 AT3	Dec 5 Seq EP PaG 8 Trig EP Trig EP
1500 1501	Subject of a Formula Changing the Subject	AT2 AT2	Alg EP Alg EP
1504	Areas under Graphs	AT2	UGr EP
1511	Defining Regions	AT2	Gra 8
1517	Trig Problems	AT3	Trig EP
1520	Differences Game	AT2	Sub 1/2
1522 1523 1524 1525	Eight Cubes A Red Cube 4 Cube Solids Economical Weaving w/s	AT3 AT3 AT3 AT3	3-D 1/2 3-D 4 3-D 5 Top 4
1528	Fraction Wall 2	AT2	Fra 6
1533	Proportion	AT2	Rat EP
1537 1538	Sim Equations & Inequalities Solving Simultaneous Equations	AT2 AT2	Gra 8 Equ 7
1540 1541	Is There a Solution? Cones	AT2 AT3	Equ 7 SA/V EP
1543	Composite Functions	AT2	Map EP
1555	Mystic Rose w/s	AT2	PaG 5
1556 1557	19 Piece Jigsaw Spirals w/s	AT2 AT3	PV/N 1/2 Dra 3
1559	Areas of Similar Shapes	AT3	S/En 7
1560	Similarity Problems	AT3	S/En 8
1561 1562	Combining Transformations Combined Reflections	AT3 AT3	CTr 7 Ref 8
1565	Symmetry w/s	AT3	Ref 4
1566	Finding Square Roots	AT2	P&R 5
1568	Velocity from Dist-Time Graphs	AT2	UGr EP
1569	Distance, Velocity & Acceleration	AT2	UGr EP
1570	Pounds and Pence w/s	AT2	Dec 5
1572	50% is Half Marks	AT2	Per 5
1589	Square Roots Investigation	AT2	P&R 7
1591 1592	Domino Sums Two Cuts Investigation w/s	AT2 AT3	Add 5 PSh 4

1604			
	Nim (MATH PUZ)	AT2	PV/N 8
1605	Guess (SENSE/NO)	AT2	Or/R 1/2
1606	Guess D (SENSE/NO)	AT2	Or/R 5
1607	Elephant (COORD)	AT3	Coo 6
1608	Reverse (MATH PUZ)	AT2	PaG 5
	, ,		
1609	Maze (MOVE)	AT3	CTr 1/2
1613	Calculating Kitty	AT2	Seq 5
1614	Probability Kitty	AT4	Pro 7
	· ·		
1615	Logical Kitty	AT4	L&S 5
1618	Number Names	AT2	PNo 6
1010	140mber 14ames	AIZ	1110 0
	. (2.55)		
1620	, ,	AT2	PaG 6
1621	Rhino (COORD)	AT3	Coo 4
1622	Vectmeet (MOVE)	AT3	Tr/V 8
1624	Snooker(ANGLE)	AT3	Ang 5
1625	Box (SENSE/NO)	AT2	PV/N 1/2
1626	Boat (MATH PUZ)	AT4	L&S 5
1627	Self Portrait w/s	AT4	L&S 4
1628	Eight Squares	AT3	A&P 3
1629	Pentagons w/s	AT3	Dra 4
1630	Along the Line	AT2	Mix 4
	Target 100		
1631	3	AT2	Dec 6
1632	Marked Buttons	AT2	Add 4
1634	Colouring the Dots	AT3	Top 4
1635	The Key to Success w/s	AT2	Mix 3
	•		
1636	Calculator Flags w/s	AT2	Mix 3
1637	Squares and Other Powers	AT2	P&R EP
1638	Tri-umph	AT2	Div 6
	•		
1639	Quarto	AT2	Dec 7
1641	Lines (COORD)	AT3	Coo 5
1643	Lucky Dip	AT4	Pro 4
1010	Barbarbina Mara	4.7.4	0
1646	Probability Kitty	AT4	Pro 8
1647	Weaving w/s	AT3	Sha 7
1648	Number Clues	AT2	PNo 3
1649	Walking to School	AT2	Rat 4
	•		nai 4
1650	Take Part (DfEE)	ReP	
1651	Frogs (MATH PUZ)	AT2	PaG 5
1652	Jugs (MATH PUZ)	AT2	Seq 7
			•
1653	Master (MATH PUZ)	AT4	L&S 7
1654	Race Game (MOVE)	AT3	Tr/V 7
1655	The Factor Game	AT2	PNo 5
	The Lost Divide		
1656		AT2	Div 6
4667	The Creek Divide		
1657	The Great Divide	AT2	Div 7
1658	The Smith Family Circus	AT2	PNo 7
1658 1659	The Smith Family Circus Mind Reversal	AT2 AT2	PNo 7 PaG 5
1658	The Smith Family Circus	AT2	PNo 7
1658 1659	The Smith Family Circus Mind Reversal	AT2 AT2	PNo 7 PaG 5
1658 1659 1660	The Smith Family Circus Mind Reversal The Champion Flea	AT2 AT2 AT2	PNo 7 PaG 5 Rat 7
1658 1659 1660 1662	The Smith Family Circus Mind Reversal The Champion Flea Get to One	AT2 AT2 AT2 AT2	PNo 7 PaG 5 Rat 7 Mix 5
1658 1659 1660	The Smith Family Circus Mind Reversal The Champion Flea	AT2 AT2 AT2	PNo 7 PaG 5 Rat 7
1658 1659 1660 1662 1663	The Smith Family Circus Mind Reversal The Champion Flea Get to One Largest and Smallest	AT2 AT2 AT2 AT2 AT2	PNo 7 PaG 5 Rat 7 Mix 5 PV/N 3
1658 1659 1660 1662	The Smith Family Circus Mind Reversal The Champion Flea Get to One Largest and Smallest (x+1) ²	AT2 AT2 AT2 AT2	PNo 7 PaG 5 Rat 7 Mix 5
1658 1659 1660 1662 1663	The Smith Family Circus Mind Reversal The Champion Flea Get to One Largest and Smallest (x+1) ²	AT2 AT2 AT2 AT2 AT2	PNo 7 PaG 5 Rat 7 Mix 5 PV/N 3
1658 1659 1660 1662 1663 1665 1666	The Smith Family Circus Mind Reversal The Champion Flea Get to One Largest and Smallest (x+1) ² Tower (SENSE/NO)	AT2 AT2 AT2 AT2 AT2 AT2 AT2	PNo 7 PaG 5 Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6
1658 1659 1660 1662 1663 1665 1666 1667	The Smith Family Circus Mind Reversal The Champion Flea Get to One Largest and Smallest (x+1) ² Tower (SENSE/NO) Pilot (MOVE)	AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT3	PNo 7 PaG 5 Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6
1658 1659 1660 1662 1663 1665 1666 1667 1668	The Smith Family Circus Mind Reversal The Champion Flea Get to One Largest and Smallest (x+1) ² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle	AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT2	PNo 7 PaG 5 Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6 Map 4
1658 1659 1660 1662 1663 1665 1666 1667	The Smith Family Circus Mind Reversal The Champion Flea Get to One Largest and Smallest (x+1) ² Tower (SENSE/NO) Pilot (MOVE)	AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT3	PNo 7 PaG 5 Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6
1658 1659 1660 1662 1663 1665 1666 1667 1668	The Smith Family Circus Mind Reversal The Champion Flea Get to One Largest and Smallest (x+1) ² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle	AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT2	PNo 7 PaG 5 Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6 Map 4
1658 1659 1660 1662 1663 1665 1666 1667 1668 1669 1670	The Smith Family Circus Mind Reversal The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes	AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT2 AT3 AT4	PNo 7 PaG 5 Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6 Map 4 PSh 1/2 Pro 8
1658 1659 1660 1662 1663 1665 1666 1667 1668 1669 1670 1671	The Smith Family Circus Mind Reversal The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box)	AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT2 AT3 AT4 AT2	PNo 7 PaG 5 Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6 Map 4 PSh 1/2 Pro 8 Mul 1/2
1658 1659 1660 1662 1663 1665 1666 1667 1668 1669 1670 1671 1672	The Smith Family Circus Mind Reversal The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box) Soma Solids	AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT4 AT3 AT4 AT2 AT3	PNo 7 PaG 5 Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6 Map 4 PSh 1/2 Pro 8 Mul 1/2 3-D 6
1658 1659 1660 1662 1663 1665 1666 1667 1668 1669 1670 1671	The Smith Family Circus Mind Reversal The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box)	AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT2 AT3 AT4 AT2	PNo 7 PaG 5 Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6 Map 4 PSh 1/2 Pro 8 Mul 1/2
1658 1659 1660 1662 1663 1665 1666 1667 1668 1669 1670 1671 1672 1673	The Smith Family Circus Mind Reversal The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box) Soma Solids	AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT4 AT3 AT4 AT2 AT3	PNo 7 PaG 5 Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6 Map 4 PSh 1/2 Pro 8 Mul 1/2 3-D 6 PNo 7
1658 1659 1660 1662 1663 1665 1666 1667 1668 1669 1670 1671 1672	The Smith Family Circus Mind Reversal The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box) Soma Solids	AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT4 AT3 AT4 AT2 AT3	PNo 7 PaG 5 Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6 Map 4 PSh 1/2 Pro 8 Mul 1/2 3-D 6
1658 1659 1660 1662 1663 1665 1666 1667 1668 1669 1670 1671 1672 1673	The Smith Family Circus Mind Reversal The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box) Soma Solids HCF and LCM Board Order	AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT4 AT3 AT4 AT2 AT3 AT4 AT2 AT3 AT4	PNo 7 PaG 5 Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6 Map 4 PSh 1/2 Pro 8 Mul 1/2 3-D 6 PNo 7 CTr 4
1658 1659 1660 1662 1663 1665 1666 1667 1668 1669 1670 1671 1672 1673	The Smith Family Circus Mind Reversal The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box) Soma Solids HCF and LCM Board Order Pythagorean Triples	AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT4 AT3 AT4 AT2 AT3 AT4 AT2 AT3 AT2	PNo 7 PaG 5 Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 4 PSh 1/2 Pro 8 Mul 1/2 3-D 6 PNo 7 CTr 4 Equ EP
1658 1659 1660 1662 1663 1665 1666 1667 1668 1669 1670 1671 1672 1673	The Smith Family Circus Mind Reversal The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box) Soma Solids HCF and LCM Board Order	AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT4 AT3 AT4 AT2 AT3 AT4 AT2 AT3 AT4	PNo 7 PaG 5 Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6 Map 4 PSh 1/2 Pro 8 Mul 1/2 3-D 6 PNo 7 CTr 4
1658 1659 1660 1662 1663 1665 1666 1667 1668 1670 1671 1672 1673	The Smith Family Circus Mind Reversal The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box) Soma Solids HCF and LCM Board Order Pythagorean Triples Proof by Contradiction	AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT4 AT3 AT4 AT3 AT2 AT3 AT2 AT3 AT2	PNo 7 PaG 5 Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6 Ang 4 PSh 1/2 Pro 8 Mul 1/2 3-D 6 PNo 7 CTr 4 Equ EP PNo EP
1658 1659 1660 1662 1663 1665 1666 1667 1668 1669 1670 1671 1672 1673 1675 1676 1677	The Smith Family Circus Mind Reversal The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box) Soma Solids HCF and LCM Board Order Pythagorean Triples Proof by Contradiction	AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT4 AT2 AT3 AT4 AT2 AT3 AT2 AT3 AT2	PNo 7 PaG 5 Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6 Map 4 PSh 1/2 Pro 8 Mul 1/2 3-D 6 PNo 7 CTr 4 Equ EP PNo EP 3-D EP
1658 1659 1660 1662 1663 1665 1666 1667 1668 1670 1671 1672 1673	The Smith Family Circus Mind Reversal The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box) Soma Solids HCF and LCM Board Order Pythagorean Triples Proof by Contradiction Spheres Reflect-a-Bug	AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT4 AT3 AT4 AT3 AT2 AT3 AT2 AT3 AT2	PNo 7 PaG 5 Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6 Ang 4 PSh 1/2 Pro 8 Mul 1/2 3-D 6 PNo 7 CTr 4 Equ EP PNo EP
1658 1659 1660 1662 1663 1665 1666 1667 1668 1669 1670 1671 1672 1673 1675 1676 1677	The Smith Family Circus Mind Reversal The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box) Soma Solids HCF and LCM Board Order Pythagorean Triples Proof by Contradiction	AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT4 AT2 AT3 AT4 AT2 AT3 AT2 AT3 AT2	PNo 7 PaG 5 Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6 Map 4 PSh 1/2 Pro 8 Mul 1/2 3-D 6 PNo 7 CTr 4 Equ EP PNo EP 3-D EP
1658 1659 1660 1662 1663 1665 1666 1667 1668 1670 1671 1672 1673 1675 1677 1679 1680 1681	The Smith Family Circus Mind Reversal The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box) Soma Solids HCF and LCM Board Order Pythagorean Triples Proof by Contradiction Spheres Reflect-a-Bug Folding	AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT4 AT3 AT4 AT3 AT2 AT3 AT2 AT3 AT2	PNo 7 PaG 5 Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6 Map 4 PSh 1/2 Pro 8 Mul 1/2 3-D 6 PNo 7 CTr 4 Equ EP PNo EP 3-D EP Ref 1/2 PSh EP
1658 1659 1660 1662 1663 1665 1666 1667 1668 1670 1671 1672 1673 1675 1677 1680 1681 1682	The Smith Family Circus Mind Reversal The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box) Soma Solids HCF and LCM Board Order Pythagorean Triples Proof by Contradiction Spheres Reflect-a-Bug Folding Number Jumble	AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT4 AT3 AT4 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2	PNo 7 PaG 5 Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6 Ang 4 PSh 1/2 Pro 8 Mul 1/2 3-D 6 PNo 7 CTr 4 Equ EP PNo EP 3-D EP Ref 1/2 PSh EP Alg 8
1658 1659 1660 1662 1663 1665 1666 1667 1670 1671 1672 1673 1675 1676 1677 1680 1681 1682 1683	The Smith Family Circus Mind Reversal The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box) Soma Solids HCF and LCM Board Order Pythagorean Triples Proof by Contradiction Spheres Reflect-a-Bug Folding Number Jumble A Square Puzzle (box)	AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT2 AT3 AT4 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3	PNo 7 PaG 5 Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6 Ang 4 PSh 1/2 Pro 8 Mul 1/2 3-D 6 PNo 7 CTr 4 Equ EP PNo EP 3-D EP Ref 1/2 PSh EP Alg 8 Div 3
1658 1659 1660 1662 1663 1665 1666 1667 1668 1670 1671 1672 1673 1675 1677 1680 1681 1682	The Smith Family Circus Mind Reversal The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box) Soma Solids HCF and LCM Board Order Pythagorean Triples Proof by Contradiction Spheres Reflect-a-Bug Folding Number Jumble	AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT4 AT3 AT4 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2	PNo 7 PaG 5 Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6 Ang 4 PSh 1/2 Pro 8 Mul 1/2 3-D 6 PNo 7 CTr 4 Equ EP PNo EP 3-D EP Ref 1/2 PSh EP Alg 8
1658 1659 1660 1662 1663 1665 1666 1667 1668 1670 1671 1672 1673 1675 1676 1677 1680 1681 1682 1683 1684	The Smith Family Circus Mind Reversal The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box) Soma Solids HCF and LCM Board Order Pythagorean Triples Proof by Contradiction Spheres Reflect-a-Bug Folding Number Jumble A Square Puzzle (box) A Problem of Power	AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT4 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT2 AT3	PNo 7 PaG 5 Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6 Map 4 PSh 1/2 Pro 8 Mul 1/2 3-D 6 PNo 7 CTr 4 Equ EP PNo EP 3-D EP Ref 1/2 PSh EP Alg 8 Div 3 P&R 8
1658 1659 1660 1662 1663 1665 1666 1667 1668 1670 1671 1672 1673 1675 1676 1677 1680 1681 1682 1683 1684 1685	The Smith Family Circus Mind Reversal The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box) Soma Solids HCF and LCM Board Order Pythagorean Triples Proof by Contradiction Spheres Reflect-a-Bug Folding Number Jumble A Square Puzzle (box) A Problem of Power Milk Crate	AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT2 AT3 AT2 AT2	PNo 7 PaG 5 Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6 Ang 4 PSh 1/2 Pro 8 Mul 1/2 3-D 6 PNo 7 CTr 4 Equ EP PNo EP 3-D EP Ref 1/2 PSh EP Alg 8 Div 3 P&R 8 L&S 6
1658 1659 1660 1662 1663 1665 1666 1667 1668 1670 1671 1672 1673 1675 1676 1677 1680 1681 1682 1683 1684 1685 1686	The Smith Family Circus Mind Reversal The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box) Soma Solids HCF and LCM Board Order Pythagorean Triples Proof by Contradiction Spheres Reflect-a-Bug Folding Number Jumble A Square Puzzle (box) A Problem of Power Milk Crate Square	AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3	PNo 7 PaG 5 Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6 Ang 4 PSh 1/2 Pro 8 Mul 1/2 3-D 6 PNo 7 CTr 4 Equ EP PNo EP 3-D EP Ref 1/2 PSh EP Alg 8 Div 3 P&R 8 L&S 6 A&P 7
1658 1659 1660 1662 1663 1665 1665 1666 1667 1671 1672 1673 1675 1676 1677 1679 1680 1681 1682 1683 1684 1685 1686 1687	The Smith Family Circus Mind Reversal The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box) Soma Solids HCF and LCM Board Order Pythagorean Triples Proof by Contradiction Spheres Reflect-a-Bug Folding Number Jumble A Square Puzzle (box) A Problem of Power Milk Crate Square Change	AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT4 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2	PNo 7 PaG 5 Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6 Ang 4 PSh 1/2 Pro 8 Mul 1/2 3-D 6 PNo 7 CTr 4 Equ EP PNo EP 3-D EP Ref EP Alg 8 Div 3 P&R 8 L&S 6 A&P 7 Add 3
1658 1659 1660 1662 1663 1665 1666 1667 1668 1670 1671 1672 1673 1675 1676 1677 1680 1681 1682 1683 1684 1685 1686	The Smith Family Circus Mind Reversal The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box) Soma Solids HCF and LCM Board Order Pythagorean Triples Proof by Contradiction Spheres Reflect-a-Bug Folding Number Jumble A Square Puzzle (box) A Problem of Power Milk Crate Square Change	AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT4 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3	PNo 7 PaG 5 Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6 Ang 4 PSh 1/2 Pro 8 Mul 1/2 3-D 6 PNo 7 CTr 4 Equ EP PNo EP 3-D EP Ref 1/2 PSh EP Alg 8 Div 3 P&R 8 L&S 6 A&P 7
1658 1659 1660 1662 1663 1665 1665 1666 1667 1671 1672 1673 1675 1676 1677 1679 1680 1681 1682 1683 1684 1685 1686 1687	The Smith Family Circus Mind Reversal The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box) Soma Solids HCF and LCM Board Order Pythagorean Triples Proof by Contradiction Spheres Reflect-a-Bug Folding Number Jumble A Square Puzzle (box) A Problem of Power Milk Crate Square Change Square Jigsaw (box)	AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT4 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT4 AT3 AT2 AT3 AT4 AT3 AT2 AT3 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT3	PNo 7 PaG 5 Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6 Ang 4 PSh 1/2 Pro 8 Mul 1/2 3-D 6 PNo 7 CTr 4 Equ EP PNo EP 3-D EP Ref 1/2 PSh 1/2 PSh 2 PSh 2 PSh 3 P&R 8 L&S 6 A&P 7 Add 3 CTr 8
1658 1659 1660 1662 1663 1665 1666 1667 1668 1669 1670 1671 1672 1673 1675 1676 1680 1681 1682 1683 1684 1685 1686 1687 1688	The Smith Family Circus Mind Reversal The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box) Soma Solids HCF and LCM Board Order Pythagorean Triples Proof by Contradiction Spheres Reflect-a-Bug Folding Number Jumble A Square Puzzle (box) A Problem of Power Milk Crate Square Change Square Jigsaw (box) Fraction Flags	AT2 AT2 AT2 AT2 AT2 AT3 AT4 AT2 AT3 AT4 AT2 AT3 AT3 AT2 AT3 AT3 AT2 AT3 AT3 AT3 AT3 AT3 AT3 AT3 AT3 AT3 AT3	PNo 7 PaG 5 Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6 Map 4 PSh 1/2 Pro 8 Mul 1/2 3-D 6 PNo 7 CTr 4 Equ EP PNo EP 3-D EP Ref 1/2 PSh EP Alg 8 Div 3 P&R 8 L&S 6 A&P 7 Add 3 CTr 8 Fra 5
1658 1659 1660 1662 1663 1665 1666 1667 1668 1669 1670 1671 1672 1673 1675 1676 1680 1681 1682 1683 1684 1685 1686 1687 1688 1689 1690	The Smith Family Circus Mind Reversal The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box) Soma Solids HCF and LCM Board Order Pythagorean Triples Proof by Contradiction Spheres Reflect-a-Bug Folding Number Jumble A Square Puzzle (box) A Problem of Power Milk Crate Square Change Square Jigsaw (box) Fraction Flags Logical Kitty	AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT4 AT2 AT3 AT4 AT2 AT3 AT3 AT2 AT3 AT3 AT3 AT2 AT3 AT3 AT4 AT3 AT2 AT4 AT3 AT2 AT4 AT3 AT2 AT4 AT3 AT2 AT4 AT3 AT4 AT3 AT4	PNo 7 PaG 5 Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6 Map 4 PSh 1/2 Pro 8 Mul 1/2 3-D 6 PNo 7 CTr 4 Equ EP PNo EP Alg 8 Div 3 P&R 8 L&S 6 A&P 7 Add 7 CTr 4 Fra 5 Pro 4
1658 1659 1660 1662 1663 1665 1666 1667 1668 1669 1670 1671 1672 1673 1675 1676 1680 1681 1682 1683 1684 1685 1686 1687 1688	The Smith Family Circus Mind Reversal The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box) Soma Solids HCF and LCM Board Order Pythagorean Triples Proof by Contradiction Spheres Reflect-a-Bug Folding Number Jumble A Square Puzzle (box) A Problem of Power Milk Crate Square Change Square Jigsaw (box) Fraction Flags	AT2 AT2 AT2 AT2 AT2 AT3 AT4 AT2 AT3 AT4 AT2 AT3 AT3 AT2 AT3 AT3 AT2 AT3 AT3 AT3 AT3 AT3 AT3 AT3 AT3 AT3 AT3	PNo 7 PaG 5 Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6 Map 4 PSh 1/2 Pro 8 Mul 1/2 3-D 6 PNo 7 CTr 4 Equ EP PNo EP 3-D EP Ref 1/2 PSh EP Alg 8 Div 3 P&R 8 L&S 6 A&P 7 Add 3 CTr 8 Fra 5
1658 1659 1660 1662 1663 1665 1666 1667 1668 1669 1670 1671 1672 1673 1675 1676 1680 1681 1682 1683 1684 1685 1686 1687 1688 1689 1690 1691	The Smith Family Circus Mind Reversal The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box) Soma Solids HCF and LCM Board Order Pythagorean Triples Proof by Contradiction Spheres Reflect-a-Bug Folding Number Jumble A Square Puzzle (box) A Problem of Power Milk Crate Square Change Square Jigsaw (box) Fraction Flags Logical Kitty Predict (PROP/NO)	AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT4 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT4 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT3 AT4 AT3 AT2 AT3 AT3 AT4 AT3 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT4 AT5 AT4 AT4 AT5 AT6 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7	PNo 7 PaG 5 Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6 Map 4 PSh 1/2 Pro 8 Mul 1/2 3-D 6 PNo 7 CTr 4 Equ EP PNo EP 3-D EP Ref 1/2 PSh EP Alg 8 Div 3 P&R 8 L&S 6 A&B 7 Add 3 CTr 5 Pro 4 PaG 7
1658 1659 1660 1662 1663 1665 1666 1667 1670 1671 1672 1673 1675 1676 1680 1681 1682 1683 1684 1685 1686 1687 1688 1689 1690 1691	The Smith Family Circus Mind Reversal The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box) Soma Solids HCF and LCM Board Order Pythagorean Triples Proof by Contradiction Spheres Reflect-a-Bug Folding Number Jumble A Square Puzzle (box) A Problem of Power Milk Crate Square Change Square Jigsaw (box) Fraction Flags Logical Kitty Predict (PROP/NO) Car Trial Results	AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT4 AT2 AT3 AT4 AT2 AT3 AT4 AT3 AT2 AT3 AT4 AT3 AT4 AT3 AT2 AT4 AT3	PNo 7 PaG 5 Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6 Map 4 PSh 1/2 Pro 8 Mul 1/2 3-D 6 PNo 7 CTr 4 Equ EP PNo EP 3-D EP Ref EP Alg 8 Div 3 P&R 8 L&S 6 A&P 7 Add 3 CTr 8 Fra 8 Fra 6 Pro 4 PaG 7
1658 1659 1660 1662 1663 1665 1666 1667 1668 1669 1670 1671 1672 1673 1675 1676 1680 1681 1682 1683 1684 1685 1686 1687 1688 1689 1690 1691	The Smith Family Circus Mind Reversal The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box) Soma Solids HCF and LCM Board Order Pythagorean Triples Proof by Contradiction Spheres Reflect-a-Bug Folding Number Jumble A Square Puzzle (box) A Problem of Power Milk Crate Square Change Square Jigsaw (box) Fraction Flags Logical Kitty Predict (PROP/NO) Car Trial Results Motor Cycle Ratios	AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT4 AT2 AT3 AT4 AT2 AT3 AT4 AT3 AT2 AT3 AT4 AT3 AT2 AT4 AT3	PNo 7 PaG 5 Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 4 PSh 1/2 Pro 8 Mul 1/2 3-D 6 PNo 7 CTr 4 Equ EP PNo EP 3-D EP Ref EP Alg 8 Div 3 P&R 8 L&S 6 A&P 7 Add 3 CTr 8 Fra 5 Pro 4 PaG 7 Rat 6 UGr 8
1658 1659 1660 1662 1663 1665 1666 1667 1670 1671 1672 1673 1675 1676 1680 1681 1682 1683 1684 1685 1686 1687 1688 1689 1690 1691	The Smith Family Circus Mind Reversal The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box) Soma Solids HCF and LCM Board Order Pythagorean Triples Proof by Contradiction Spheres Reflect-a-Bug Folding Number Jumble A Square Puzzle (box) A Problem of Power Milk Crate Square Change Square Jigsaw (box) Fraction Flags Logical Kitty Predict (PROP/NO) Car Trial Results	AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT4 AT2 AT3 AT4 AT2 AT3 AT4 AT3 AT2 AT3 AT4 AT3 AT4 AT3 AT2 AT4 AT3	PNo 7 PaG 5 Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6 Map 4 PSh 1/2 Pro 8 Mul 1/2 3-D 6 PNo 7 CTr 4 Equ EP PNo EP 3-D EP Ref EP Alg 8 Div 3 P&R 8 L&S 6 A&P 7 Add 3 CTr 8 Fra 8 Fra 6 Pro 4 PaG 7
1658 1659 1660 1662 1663 1665 1666 1667 1668 1670 1671 1672 1673 1675 1677 1680 1681 1682 1683 1684 1685 1686 1687 1690 1691	The Smith Family Circus Mind Reversal The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box) Soma Solids HCF and LCM Board Order Pythagorean Triples Proof by Contradiction Spheres Reflect-a-Bug Folding Number Jumble A Square Puzzle (box) A Problem of Power Milk Crate Square Change Square Jigsaw (box) Fraction Flags Logical Kitty Predict (PROP/NO) Car Trial Results Motor Cycle Ratios	AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT4 AT2 AT3 AT2 AT4 AT3	PNo 7 PaG 5 Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 4 PSh 1/2 Pro 8 Mul 1/2 3-D 6 PNo 7 CTr Equ EP PNo EP Alg B Div B Div B Div B Div B CTr 8 Fra 5 Pro 4 PaG 7 Rat 6 UGr 8 PSh 5
1658 1659 1660 1662 1663 1665 1666 1667 1668 1669 1670 1671 1672 1673 1675 1676 1680 1681 1682 1683 1684 1685 1686 1687 1688 1689 1690 1691	The Smith Family Circus Mind Reversal The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box) Soma Solids HCF and LCM Board Order Pythagorean Triples Proof by Contradiction Spheres Reflect-a-Bug Folding Number Jumble A Square Puzzle (box) A Problem of Power Milk Crate Square Change Square Jigsaw (box) Fraction Flags Logical Kitty Predict (PROP/NO) Car Trial Results Motor Cycle Ratios Identikit	AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT4 AT2 AT3 AT4 AT2 AT3 AT4 AT3 AT2 AT3 AT4 AT3 AT2 AT4 AT3	PNo 7 PaG 5 Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 4 PSh 1/2 Pro 8 Mul 1/2 3-D 6 PNo 7 CTr 4 Equ EP PNo EP 3-D EP Ref EP Alg 8 Div 3 P&R 8 L&S 6 A&P 7 Add 3 CTr 8 Fra 5 Pro 4 PaG 7 Rat 6 UGr 8

1700 1701	Fitting Posthalf (poster)	AT3 O.R.	Sha	3
1702	Circle (INVEST)	ReP.		
1703 1704	Find the Uncle w/s Combined Probability	AT4 AT4	L&S Pro	3 8
1706	Think	AT4	L&S	7
1707	Graph Matching	AT2	Gra	8
1708	Factor (PROP/NO)	AT2	PNo	6
1709	Ratio Problems	AT2	Rat	6
1710	Pencils	AT2	Rat	4
1711	Missing Digits w/s	AT2	Mix	6
1712 1713	Four Signs w/s	AT2	Mix	7
1714	Sub-zero Queens (MOVE Pg 33)	AT2 AT3	Sub Tr/V	4 6
1715	Locate (COORD)	AT3	Coo	6
1716	Unibond Mixtures	AT2	Rat	7
1717	Add-a-Square w/s	AT3	Ref	5
1718	Line Symmetry A 1-4 (DIME)	AT3	Ref	5
1719	Line Symmetry A 5-10 (DIME)	AT3	Ref	6
1720	Centicube Surprise	AT3	SAV	
1721	Angle 90°(ANGLE)	AT3	Ang	4
1722 1723	How Many Cubes? Getting Closer	AT3 AT2	SA/V Div	1/2
1723	Digit Division	AT2	Dec	6
1725	Closest Product	AT2	Mul	6
1726	Dividing Pairs	AT2	Div	6
1727	Point Circles	AT2	PNo	5
1728	BoxD (SENSE/NO)	AT2	Dec	5
1729	Minimax(SENSE/NO & DfEE)	AT2	PV/N	5
1730	Wall (SENSE/NO)	AT2	Fra	4
1731	Rose (INVEST)	AT2	PaG	6
1732	3-D Maze (MOVE)	AT3	3-D	6
1733	An Even Code w/s	AT2	Map	3
1734	An Islamic Design w/s	AT4	L&S	7
1735 1736	Centimetres Algebra Pairs	AT3 AT2	Mea Alg	1/2 8
1737	Route Six	AT2	Fra	6
1738	Calcumaze	AT2	Mul	6
1740	About How Much?	AT3	Mea	4
1741	Make Half	AT3	A&P	5
1742	The Game of 20	AT2	Mul	6
1743	Decimal Products	AT2	Dec	5
1744	Yes/No	AT3	PSh	6
1745	Identify (PROP/NO)	AT2	PNo	5
1746 1747	Define (PROP/NO) Darts (NUM)	AT2 AT2	PNo Sub	6 4
1749	Decimal Jigsaw	AT2	Dec	5
1750	Layers	AT3	SAV	4
1751	Decimal Lists	AT2	Dec Rat	4
1752 1753	Under a Magnifying Glass Matching Pairs w/s	AT2 AT3	Mea	5 4
1754	Chinese Number Puzzle (box)	AT2	PV/N	6
1755	Hopslide (MATH PUZ)	AT4	L&S	4
1756	Tadpoles (MATH PUZ)	AT2	PaG	4
1757	Airline Networks	AT3	Top	5
1758	Co-ordinate Messages w/s	AT3	Coo	3
1759	Shapes That Can Grow w/s	AT3	S/En	6
1760	One Straight Cut w/s	AT3	Sha	6
1761	Gelosia Problems w/s	AT2	Mul	6
1762	From A to B	AT3	Trig	7
1763	Circles Triangles and Hexagons	AT3	CiM	EP
1764	Tangled Quadrilaterals	AT3	PSh	6
1765	Two by Two	AT3 AT4	3-D	3 7
1766 1767	Flying Engineers Addsupto (NUM)	AT2	L&S Add	5
1768	Zig Zags w/s	AT3	Mea	3
. 770	The Lewis Femily	AT4	100	6
1770	The Lewis Family	AT4	L&S	6 7
1771 1772	Early Egyptian Fractions Four Triangles	AT2 AT3	Fra PSh	6
1773	Two Triangles	AT3	PSh	6
1774	Modelling with Graphs	AT2	UGr	8
1775	Partners	AT2	Alg	ΕP
1776	Spirals (INVEST)	ReP.	,g	_,
1777	Avoid Each Other (MOVE Pg 30)	AT3	Tr/V	7
1778	Jumping (MATH PUZ)	AT2	PaG	6
1779	Lineover (GRAPH)	AT2	Gra	ΕP
1782	To be Continued	AT2	Mul	5
783	Calculating Booklet	O.R.		_
784	Big Wheel	AT3	Trig	EP
1785	Invest. Queens (MOVE Pg 32)	AT2	PaG	7
786	Which Number?	AT2	PV/N	5
1787 1788	Angle 360° (ANGLE) Blocked (poster)	AT3 AT4	Ang L&S	5 8
1790	The Chinese Triangle	AT2	PaG	7
1790 1791	The Chinese Triangle Getting Into Shape (box)	AT3	PSh	4
792	Feeling Hungry?	AT4	DDa	5
793	Cuneiform Numbers	AT2	PV/N	
1794	Building Cubes	AT3	3-D	6
795	Identical Halves w/s	AT3	PSh	ΕP
796	Plotter (GRAPH)	ReP.		
			_	
798	Quilts (INVEST)	AT2	PaG	6
799	Boxes w/s	AT2	DNo	4

1800	Gelosia for Decimals	AT2	Dec 7	
1812	Find Four Squares w/s	AT3	PSh 3	
1813	Crossword w/s	AT2	Mix 3	
1818	Helicopter Photographs	AT2	UGr 7	
	The second of th		1	
1820	Parallels (GRAPH)	AT2	Gra 7	
1821	Overtaking	AT2	UGr 7	
1822	Product of Primes	AT2	Mul 7	
1824	Silver Earrings w/s	АТЗ	A&P 4	
1825	Exactly Ten	AT2	Add 4	
1826	y=mx (GRAPH)	AT2	Gra 6	
	, (====,			
1828	Find the Shape w/s	AT3	PSh 3	
1830	The 'Smoothing Out' Principle	AT2	UGr 8	
1030	The Smoothing Out Principle	AIZ	odi 8	
1832	Minimum Information	АТЗ	Dra EP	
1833	Magic (NUM)	AT2	Mix 6	
1834	Tenners (NUM)	AT2	Dec 5	
1835	Magnify (SENSE/NO)	AT2	PV/N 5	
1836	3 in a Line (COORD)	AT3	Coo 6	
4000	Mich Condin Minning	AT4	100 10	
1839 1840	Which Card is Missing? Point And Lines (GRAPH)	AT4 AT2	L&S 1/2 Gra EP	
1841	Interlocking Squares (DIME)	AT3	PSh 1/2	
1842	Shapes Jigsaw (DIME)	AT3	PSh 1/2	
1843	Polygons and Right Angles	AT3	PSh 8	
1844	Straight Lines w/s	AT3	Dra 4	
1845	Shading Strips	AT4	Pro 4	
1847	Symmetrical Triangles w/s	AT3	Ref 4	
1848	Three by Three	AT4	L&S 4	
1849	100 Search w/s	AT2	Add 3	
1851	Regions (GRAPH)	ReP.		
1852	Foxes & Chickens (GRAPH)	AT2	UGr EP	
1853	Pinball (INVEST)	ReP.		
1855	Quadratic Mappings (DIME)	AT2	Map 7	
1856	What Shapes? w/s	AT3	PSh 1/2	
1857 1858	The Other Side Bengali >> Piece Puzzle (box)	AT3 AT2	3-D 8 PV/N 5	
1000	bengan by Tiece Tuzzie (box)	712	7 7/14 3	
1861	Dipsticks	AT3	SAV 7	
1862	Even Animal w/s	AT2	PNo 1/2	
1000	Missos Match (DIME)	ATO	Def 5	
1866 1867	Mirror Match (DIME) Four Cubes	AT3 AT3	Ref 5 3-D 1/2	
1868	Symmetry Match w/s	AT3	Ref 1/2	
,,,,,	Cymmetry Materiative	, ,, ,		
			1/2	
1872	Back to Back	АТЗ	3-D 4	
1873	Polygon Symmetries	AT3	3-D 4 PSh 7	
1873 1874	Polygon Symmetries Sevens Out	AT3 AT2	3-D 4 PSh 7 PV/N 3	
1873 1874 1875	Polygon Symmetries Sevens Out Urdu Multiples	AT3 AT2 AT2	3-D 4 PSh 7 PV/N 3 PV/N 6	
1873 1874 1875 1876	Polygon Symmetries Sevens Out Urdu Multiples Fill the Shape (DIME)	AT3 AT2 AT2 AT3	3-D 4 PSh 7 PV/N 3 PV/N 6 3-D 3	
1873 1874 1875 1876 1877	Polygon Symmetries Sevens Out Urdu Multiples Fill the Shape (DIME) Add a Cube or Two (DIME)	AT3 AT2 AT2 AT3 AT3	3-D 4 PSh 7 PV/N 3 PV/N 6 3-D 3 3-D 5	
1873 1874 1875 1876 1877 1878	Polygon Symmetries Sevens Out Urdu Multiples Fill the Shape (DIME) Add a Cube or Two (DIME) Two Blocks (DIME)	AT3 AT2 AT2 AT3 AT3	3-D 4 PSh 7 PV/N 3 PV/N 6 3-D 3 3-D 5 3-D 4	
1873 1874 1875 1876 1877 1878 1879	Polygon Symmetries Sevens Out Urdu Multiples Fill the Shape (DIME) Add a Cube or Two (DIME) Two Blocks (DIME) Build and Balance (DIME)	AT3 AT2 AT2 AT3 AT3 AT3	3-D 4 PSh 7 PV/N 3 PV/N 6 3-D 3 3-D 5 3-D 4 3-D 7	
1873 1874 1875 1876 1877 1878 1879 1880	Polygon Symmetries Sevens Out Urdu Multiples Fill the Shape (DIME) Add a Cube or Two (DIME) Two Blocks (DIME) Build and Balance (DIME) More than Two Blocks (DIME)	AT3 AT2 AT2 AT3 AT3 AT3 AT3	3-D 4 PSh 7 PV/N 3 PV/N 6 3-D 3 3-D 5 3-D 4 3-D 7 3-D 6	
1873 1874 1875 1876 1877 1878 1879 1880 1881	Polygon Symmetries Sevens Out Urdu Multiples Fill the Shape (DIME) Add a Cube or Two (DIME) Two Blocks (DIME) Build and Balance (DIME) More than Two Blocks (DIME) Hindi Additions	AT3 AT2 AT3 AT3 AT3 AT3 AT3 AT3	3-D 4 PSh 7 PV/N 3 PV/N 6 3-D 3 3-D 5 3-D 4 3-D 7 3-D 6 PV/N 7	
1873 1874 1875 1876 1877 1878 1879 1880	Polygon Symmetries Sevens Out Urdu Multiples Fill the Shape (DIME) Add a Cube or Two (DIME) Two Blocks (DIME) Build and Balance (DIME) More than Two Blocks (DIME) Hindi Additions Wedges 1 (DIME)	AT3 AT2 AT2 AT3 AT3 AT3 AT3	3-D 4 PSh 7 PV/N 3 PV/N 6 3-D 3 3-D 5 3-D 4 3-D 7 3-D 6	
1873 1874 1875 1876 1877 1878 1879 1880 1881 1882	Polygon Symmetries Sevens Out Urdu Multiples Fill the Shape (DIME) Add a Cube or Two (DIME) Two Blocks (DIME) Build and Balance (DIME) More than Two Blocks (DIME) Hindi Additions Wedges 1 (DIME) Wedges 2 (DIME)	AT3 AT2 AT3 AT3 AT3 AT3 AT3 AT2 AT3	3-D 4 PSh 7 PV/N 3 PV/N 6 3-D 3 3-D 5 3-D 4 3-D 7 3-D 6 PV/N 7 3-D 6 3-D 8	
1873 1874 1875 1876 1877 1878 1879 1880 1881 1882 1883	Polygon Symmetries Sevens Out Urdu Multiples Fill the Shape (DIME) Add a Cube or Two (DIME) Two Blocks (DIME) Build and Balance (DIME) More than Two Blocks (DIME) Hindi Additions Wedges 1 (DIME) Wedges 2 (DIME) Optimising	AT3 AT2 AT3 AT3 AT3 AT3 AT3 AT3 AT3 AT3 AT4 AT5 AT5 AT7 AT7 AT7	3-D 4 PSh 7 PV/N 3 PV/N 6 3-D 3 3-D 5 3-D 4 3-D 7 3-D 6 PV/N 7 3-D 6 3-D 8 SAV EP	
1873 1874 1875 1876 1877 1878 1879 1880 1881 1882 1883	Polygon Symmetries Sevens Out Urdu Multiples Fill the Shape (DIME) Add a Cube or Two (DIME) Two Blocks (DIME) Build and Balance (DIME) More than Two Blocks (DIME) Hindi Additions Wedges 1 (DIME) Wedges 2 (DIME)	AT3 AT2 AT3 AT3 AT3 AT3 AT3 AT3 AT3 AT3 AT2 AT3	3-D 4 PSh 7 PV/N 3 PV/N 6 3-D 3 3-D 5 3-D 4 3-D 7 3-D 6 PV/N 7 3-D 6 3-D 8	
1873 1874 1875 1876 1877 1878 1879 1880 1881 1882 1883	Polygon Symmetries Sevens Out Urdu Multiples Fill the Shape (DIME) Add a Cube or Two (DIME) Two Blocks (DIME) Build and Balance (DIME) More than Two Blocks (DIME) Hindi Additions Wedges 1 (DIME) Wedges 2 (DIME) Optimising World View	AT3 AT2 AT3	3-D 4 PSh 7 PV/N 3 PV/N 6 3-D 3 3-D 5 3-D 4 3-D 7 3-D 6 PV/N 7 3-D 6 3-D 8 SAV EP A&P 6	
1873 1874 1875 1876 1877 1878 1879 1880 1881 1882 1883 1885 1886	Polygon Symmetries Sevens Out Urdu Multiples Fill the Shape (DIME) Add a Cube or Two (DIME) Two Blocks (DIME) Build and Balance (DIME) More than Two Blocks (DIME) Hindi Additions Wedges 1 (DIME) Wedges 2 (DIME) Optimising World View Regular Tilings 1 (DIME)	AT3 AT2 AT3	3-D 4 PSh 7 PV/N 3 PV/N 6 3-D 3 3-D 5 3-D 4 3-D 7 3-D 6 PV/N 7 3-D 6 3-D 8 SAV EP A&P 6	
1873 1874 1875 1876 1877 1878 1879 1880 1881 1882 1883 1885 1886	Polygon Symmetries Sevens Out Urdu Multiples Fill the Shape (DIME) Add a Cube or Two (DIME) Two Blocks (DIME) Build and Balance (DIME) More than Two Blocks (DIME) Hindi Additions Wedges 1 (DIME) Wedges 2 (DIME) Optimising World View Regular Tilings 1 (DIME) Regular Tilings 2 (DIME)	AT3 AT2 AT3	3-D 4 PSh 7 PV/N 3 PV/N 6 3-D 3 3-D 5 3-D 4 3-D 7 3-D 6 PV/N 7 3-D 6 3-D 8 SAV EP A&P 6 Sha 5 Sha 6	
1873 1874 1875 1876 1877 1878 1879 1880 1881 1882 1883 1885 1886	Polygon Symmetries Sevens Out Urdu Multiples Fill the Shape (DIME) Add a Cube or Two (DIME) Two Blocks (DIME) Build and Balance (DIME) More than Two Blocks (DIME) Hindi Additions Wedges 1 (DIME) Wedges 2 (DIME) Optimising World View Regular Tillings 1 (DIME) Regular Tillings 3 (DIME)	AT3 AT2 AT3	3-D 4 PSh 7 PV/N 3 PV/N 6 3-D 3 3-D 5 3-D 4 3-D 7 3-D 6 PV/N 7 3-D 6 3-D 8 SAV EP A&P 6	
1873 1874 1875 1876 1877 1878 1879 1880 1881 1882 1883 1885 1886	Polygon Symmetries Sevens Out Urdu Multiples Fill the Shape (DIME) Add a Cube or Two (DIME) Two Blocks (DIME) Build and Balance (DIME) More than Two Blocks (DIME) Hindi Additions Wedges 1 (DIME) Wedges 2 (DIME) Optimising World View Regular Tilings 1 (DIME) Regular Tilings 2 (DIME) Regular Tilings 3 (DIME) Line Symmetry B 1-3 (DIME)	AT3 AT2 AT3	3-D 4 PSh 7 PV/N 3 PV/N 6 3-D 3 3-D 5 3-D 4 3-D 7 3-D 6 PV/N 7 3-D 6 3-D 8 SAV EP A&P 6 Sha 5 Sha 6 Sha 6	
1873 1874 1875 1876 1877 1878 1880 1881 1882 1883 1885 1886 1889 1890 1891 1892	Polygon Symmetries Sevens Out Urdu Multiples Fill the Shape (DIME) Add a Cube or Two (DIME) Two Blocks (DIME) Build and Balance (DIME) More than Two Blocks (DIME) Hindi Additions Wedges 1 (DIME) Wedges 2 (DIME) Optimising World View Regular Tillings 1 (DIME) Regular Tillings 3 (DIME)	AT3 AT2 AT3	3-D 4 PSh 7 PV/N 3 PV/N 6 3-D 3 3-D 5 3-D 7 3-D 6 PV/N 7 3-D 6 3-D 8 SAV EP A&P 6 Sha 6 Sha 6 Sha 6 Ref 5	
1873 1874 1875 1876 1877 1878 1880 1881 1882 1883 1885 1886 1889 1890 1891 1892 1893 1894	Polygon Symmetries Sevens Out Urdu Multiples Fill the Shape (DIME) Add a Cube or Two (DIME) Two Blocks (DIME) Build and Balance (DIME) More than Two Blocks (DIME) Hindi Additions Wedges 1 (DIME) Wedges 2 (DIME) Optimising World View Regular Tilings 1 (DIME) Regular Tilings 2 (DIME) Line Symmetry B 1-3 (DIME) Line Symmetry B 4-6 (DIME) Line Symmetry B 7-10 (DIME)	AT3 AT2 AT3	3-D 4 PSh 7 PV/N 3 PV/N 6 3-D 3 3-D 5 3-D 7 3-D 6 PV/N 7 3-D 6 3-D 8 SAV EP A&P 6 Sha 5 Sha 6 Sha 6 Ref 7 Ref 7	
1873 1874 1875 1876 1877 1878 1880 1881 1882 1883 1885 1886 1889 1890 1891 1892 1893 1894	Polygon Symmetries Sevens Out Urdu Multiples Fill the Shape (DIME) Add a Cube or Two (DIME) Two Blocks (DIME) Build and Balance (DIME) More than Two Blocks (DIME) Hindi Additions Wedges 1 (DIME) Wedges 2 (DIME) Optimising World View Regular Tilings 1 (DIME) Regular Tilings 2 (DIME) Regular Tilings 3 (DIME) Line Symmetry B 1-3 (DIME) Line Symmetry B 4-6 (DIME) Line Symmetry B 7-10 (DIME)	AT3 AT2 AT3	3-D 4 PSh 7 PV/N 3 PV/N 6 3-D 3 3-D 5 3-D 7 3-D 6 PV/N 7 3-D 6 3-D 8 SAV EP A&P 6 Sha 5 Sha 6 Sha 6 Ref 7 Ref 7	
1873 1874 1875 1876 1877 1878 1889 1880 1881 1882 1883 1885 1886 1890 1891 1892 1893 1894	Polygon Symmetries Sevens Out Urdu Multiples Fill the Shape (DIME) Add a Cube or Two (DIME) Two Blocks (DIME) Build and Balance (DIME) More than Two Blocks (DIME) Hindi Additions Wedges 1 (DIME) Wedges 2 (DIME) Optimising World View Regular Tilings 1 (DIME) Regular Tilings 2 (DIME) Regular Tilings 3 (DIME) Line Symmetry B 1-3 (DIME) Line Symmetry B 4-6 (DIME) Line Symmetry B 7-10 (DIME) Spatial Reasoning (DIME) Who is the Schoolkeeper?	AT3 AT2 AT3	3-D 4 PSh 7 PV/N 3 PV/N 6 3-D 3 3-D 5 3-D 7 3-D 6 PV/N 7 3-D 6 3-D 8 SAV EP A&P 6 Sha 6 Sha 6 Sha 6 Shef 7 Ref 7 Sha 4 L&S 5	
1873 1874 1875 1876 1877 1878 1889 1880 1881 1882 1883 1885 1886 1889 1890 1891 1892 1893 1894	Polygon Symmetries Sevens Out Urdu Multiples Fill the Shape (DIME) Add a Cube or Two (DIME) Two Blocks (DIME) Build and Balance (DIME) More than Two Blocks (DIME) Hindi Additions Wedges 1 (DIME) Wedges 2 (DIME) Optimising World View Regular Tilings 1 (DIME) Regular Tilings 2 (DIME) Regular Tilings 3 (DIME) Line Symmetry B 1-3 (DIME) Line Symmetry B 4-6 (DIME) Line Symmetry B 7-10 (DIME) Spatial Reasoning (DIME) Who is the Schoolkeeper? Who has the Microcomputer?	AT3 AT2 AT3	3-D 4 PSh 7 PV/N 3 PV/N 6 3-D 3 3-D 5 3-D 7 3-D 6 PV/N 7 3-D 6 3-D 8 SAV EP A&P 6 Sha 5 Sha 6 Sha 6 Ref 7 Ref 7 Sha 4 L&S 7	
1873 1874 1875 1876 1877 1878 1889 1880 1881 1882 1883 1885 1886 1890 1891 1892 1893 1894	Polygon Symmetries Sevens Out Urdu Multiples Fill the Shape (DIME) Add a Cube or Two (DIME) Two Blocks (DIME) Build and Balance (DIME) More than Two Blocks (DIME) Hindi Additions Wedges 1 (DIME) Wedges 2 (DIME) Optimising World View Regular Tilings 1 (DIME) Regular Tilings 2 (DIME) Regular Tilings 3 (DIME) Line Symmetry B 1-3 (DIME) Line Symmetry B 4-6 (DIME) Line Symmetry B 7-10 (DIME) Spatial Reasoning (DIME) Who is the Schoolkeeper?	AT3 AT2 AT3	3-D 4 PSh 7 PV/N 3 PV/N 6 3-D 3 3-D 5 3-D 7 3-D 6 PV/N 7 3-D 6 3-D 8 SAV EP A&P 6 Sha 6 Sha 6 Sha 6 Shef 7 Ref 7 Sha 4 L&S 5	

1902	Short, Middle, Long	AT3	Trig	6
1903	Numbers (PROP/NO)	ReP		
1904	Find the Operation w/s	AT2	Alg	7
1905	Sorting Triangles	AT3	S/En	4
1907	About How Long? w/s	АТ3	Mea	3
1908	Pattern Pack A (DIME)	AT3	CTr	1/2
1909	Pattern Pack B (DIME)	AT3	CTr	1/2
1303	Talletti Facili Divizi	Α,υ	O III	1/2
1911	Dissection Pairs w/s	АТЗ	Sha	7
1912	Painted Tyres	AT3	Dra	7
1913	Bengali Numbers	AT2	PV/N	5
1914	Adding Counters w/s	AT3	Ref	5
1016	A Domino Trick	ATO	Eau	
1916 1917	Rising Gradients	AT2 AT3	Equ Trig	8 7
	The Coin Problem		_	
1918		AT4	L&S	EP
1919	How many Cm Squares? w/s	AT3	A&P	1/2
1920	Pattern Spotting (PROP/NO Pg 16		PNo	3
1921	Trig Lines	AT3	Trig	8
1922	Matrices and Area	АТЗ	S/En	EΡ
1927	Pentomino Puzzles	AT3	A&P	5
1928	Four Pentominoes	AT3	S/En	7
1929	Nine Pentominoes	AT3	S/En	8
1931	Which Scripts? (poster)	AT2	PV/N	6
1934	Translations	AT3	Tr/V	7
1935	Angles in a Semi-circle	AT3	APr	7
1936	Many Grids (PROP/NO Pg 25)	AT2	PaG	5
1937	Panjabi Numbers	AT2	PV/N	7
1938	Olympic Medals	AT4	DDa	6
1939	Sin and Cos Graphs	АТЗ	Trig	EP
1940	Dividing Investigation	AT2	Div	6
1941	Differences	AT2	Seq	8
1942	Growing Patterns w/s	AT3	Dra	1/2
404-			_	_
1945	Square Diagonals w/s	AT2	Seq	3
1946	A Problem of Division	AT2	Div	5
1947	3-D Frameworks	AT3	Тор	6
1948	$y = ax^2$	AT2	Gra	7
1949	Compass Game	AT3	Rot	3
1950	Diagonal Multiples (PROP/NO Pg 26)		PNo	7
1951	When x is?	AT2	Gra	8
1952	Reciprocal Graphs	AT2	Gra	8
1953	Sets of Signs	AT4	L&S	6
1954		AT3	Ref	5
1955	Rotational Symmetry	ETA	Rot	6
1956	Thinking and Braking	AT2	UGr	8
1958	Ealing Broadway	AT3	Тор	6
1959	Making One w/s	AT2	Fra	3
1961	One Million (TARQUIN Poster)	AT2	Mix	6
1966	Curve Stitching (TARQUIN Poster)	O.B		
1967	One Dice (DIME)	AT4	Pro	6
1968	Numbers Up (DIME)	AT4	Pro	7
1969	Two Dice (DIME)	AT4	Pro	6
1970	Five Beads (DIME)	AT4	Pro	7
1971	Seven Beads (DIME)	AT4	Pro	8
				•
1999	Equiangular Spirals	AT3	Ang	7

2000	Fibonacci & Square Root Spirals	AT2	P&R	8
2002 2003 2004	Real Spirals Birthday Dates 54% is a little more than Half Marks	O.R. AT2 AT2	Add Per	1/2
2006	A Mountain Walk	AT2	Rat	7
2008 2009 2010 2011 2012 2013 2014	Curves of Pursuit (TARQUIN P) Three Counters (DIME) Six Beads (DIME) Four Beads (DIME) Tessellating Patterns (TARQUIN P Round the Bend Probably Probable? (INVESTPg 4:	AT3	Pro Pro Pro Sha CiM Pro	6 6 5 6 EP
2016 2017 2018 2019 2020	Target 24 - a 3 Digit Problem Fair Play Drawing the Curve Power Match w/s High Powered Matching w/s	AT2 AT4 AT2 AT2 AT2	Mix Pro Gra P&R P&R	8 4 7 6 7
2022 2023 2024	Fewest Keys Alphabet Symmetry w/s Excess Luggage	AT2 AT3 AT2	Mix CTr Per	6 5 7
2027 2028 2029	Similar Triangles Integer Graphs Strings	AT3 AT2 AT2	S/En Gra Seq	8 EP 8
2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044	Spiralling Squares Patterns DIY Earrings Is it True? Likely or unlikely? Symmetry Codes w/s Fabric Designs 3 in 1 Maze (poster) Percentage Problems Finding Equivalent Fractions x* Experiment Going Scientific Ans and Exe Unit Fraction Patterns Matching Graphs	AT3 AT4 AT4 AT3 AT3 AT4 AT2 AT2 AT2 AT2 AT2 AT2 AT2	Dra CiM CDa Pro Ref CiM L&S Per Fra P&R P&R Seq Fra Gra	7 8 5 5 5 EP 4 EP 5 7 8 7 EP
2045	Hot and Cold w/s Pegs in Squares	AT2	DNo P&R	4
2049 2050 2051 2052 2053 2054 2055 2056	Unpredictable Patterns? Vector Areas The Log Button Pythagoras Dissection Odd Add Four Sides Ellipses by Folding Surrounding Right Angled Tris w/s	AT2 AT3 AT2 AT2 AT2 AT3 AT3	Seq Tr/V Mix Rat Add PSh Dra Trig	8 EP EP 8 5 3 7 6
2058 2059 2060 2061 2062 2063 2064 2065	Tie w/s Domino Patterns Kit Bag Convince Yourself Angles in Circles Islamic Designs Russian Multiplication Shrinking Earth	AT3 AT2 AT3 AT2 AT3 AT3 AT2 AT2	Dra Map CiM Mix APr Dra Mul Rat	7 5 6 7 8 5 7
2067	Jeans	AT2	Rat	7
2069 2070 2071 2072 2073 2074 2075 2076 2077 2078 2079	Turn it Over! Card Towers Half a Cuboid Nepali Numbers Tricubes (DIME) Building with Tricubes (DIME) Tricube Plans (DIME) Building on a Square (DIME) Making a 3 x 3 x 3 Cube (DIME) Fibonacci-type Sequences A Sketchy Activity	AT4 AT2 AT3 AT2 AT3 AT3 AT3 AT3 AT3 AT2 AT2	L&S Seq 3-D Mix 3-D 3-D 3-D 3-D Seq Gra	8 6 4 5 5 6 6 7 8
2081 2082 2083 2084 2085 2086	Inventing Mazes Opposite, Adjacent & Hypotenuse All about Circles Polygon Areas Scale Maps Circles to Polygons (INVEST Pg 10)	AT4 AT3 AT3 AT3 AT3 AT2	L&S Trig CiM A&P CTr PaG	6 8 5 7 EP 4
2088 2089 2090	What's the Difference? w/s Oxford Street w/s Black & Red Triangle Patterns	AT4 AT3 AT2	L&S Top PNo	5 1/2 5
2092 2093 2094 2095 2096 2097	What's Recurring? Islamic Patterns in Logo Squares (INVEST Pg 4) Squares, Cubes and Roots w/s Fraction Playing Cards Fraction Families	AT2 AT3 AT2 AT2 O.R. AT2	Fra CTr PNo P&R Fra	EP EP 3 6

2100 2101	Putting it to the test Logiblock Sets	AT4 AT4	Pro L&S	7 7	2200 2201	Pie Charts for Breakfast Vectors and Squares	AT4 AT3	DDa Tr/V	5 7	2300 • 2301	Fraction Bingo Sim Equations from Graphs	AT2	Fra Gra	5 7
2103	Circle Packing	АТ3	CiM	8.	2202 2203	Visiting Every Point (INVEST Pg 8) Algebra Match w/s	AT2	PNo Alg	5 7	2302 2303 2304	Bearings Hundred Fit (box) Favourite Ice Cream	AT3 AT2 AT4	Ang Seq AIDa	5 4 3
2105	Equal Fraction Pairs	AT2	Fra	3	2205	Making 25p	AT2	Add	1/2	2305	Hexagon Puzzle w/s	AT2	PV/N	1/2
2106	Party Solutions	AT2	UGr ,		2206	Exploring Sine Curves	ETA	Trig	EP	2306 2307	Patterns on a Line w/s Triangle Sums Game	AT3 AT2	TTO DDA	1/2 1/2
2107	Oxfam Collection w/s	AT2	Add	4	2207 2208	Pinball Experiments Best Marks	AT4 AT4	Pro AlDa	7 7	2308	Word Match w/s	ETA	PSh	1/2
2109	Another Trig Line	АТЗ	Trig	8	2209	Short Orders	AT2	Alg	5	2309 2310	Rangoli Patterns Sequences Jigsaw w/s	AT3 AT2	Ref Seq	5 4
2110	Number Sort w/s	AT2	PV/N		2210	Handspan	AT4	AlDa	3 7	2310	Start with 60°	AT3	Dra	6
2111 2112	Rotational Symmetry Jigsaws Imaginings (Teacher)	AT3 O.R.	Rot	4	2211	Equivalent Expressions w/s 10 Search w/s	AT2 AT2	Alg Add	1/2	2312	Number Challenge	AT2	PNo	7
2113	Mystery (Calculating Pg 3)	AT2	Mix	3	2213	Sum Message w/s	AT2	Mix	1/2	2313 2314	Turning the Cards Describing Sequences	AT4 AT2	Pro Seq	3 3
2114 2115	2 Puzzles (Calculating Pg 5) Missing Digit (Calculating Pg 8)	AT2 AT2	Mix Mix	4 6	2214 2215	Shape Sequences Identicubes	AT3 AT2	CTr Alg	7 8	2315	With a ruler	АТЗ	Mea	3
2116	Operations (Calculating Pg 9)	AT2	Mix	4	2216	From Matches to Mappings w/s	AT2	Мар	5					
2117	Rumour (Calculating Pg 10)	AT4	CDa	6	2217	Magic Circles	AT2	Add	5	2318	A Mean Challenge!	AT4	AlDa	7
2118 2119	Ticket Sales (Calculating Pg 11) Patterns (Calculating Pg 12/13)	AT2 AT2	Mix Seq	4 5	2218 2219	Origami Dodecahedron Origami Cube	AT3 AT3	3-D 3-D	7 5	2319 2320	Pizza or Pasta? Patterns in Spirals	AT4 AT2	Pro Seg	4 5
2120	Productive (Calculating Pg 14)	AT2	Mul	5	2220	Trig for any Triangle	AT3	Trig	EP	2321	The Algebra Game	AT2	Alg	6
2121 2122	Hot and Cold (Calculating Pg 15) Target 200 (Calculating Pg 16)	AT4 AT2	AIDa Mix	4 5	2221 2222	Jigsaws Equal Area? w/s	AT2 AT3	PaG A&P	5 6	2322 2323	The Algebra Game 2 Statistical Invs Helpbook	AT2 O.R.	Alg	7
2123	Missing Signs (Calculating Pg 17)		Mix	6	2223	Fractions to Decimals Match w/s	AT2	Dec	6	2324	Reckonings (Teacher)	O.R.		
2124	Date of Birth (Calculating Pg 18/19)	AT2	Mix	5	2224	Shajjad's Collection	AT2	Mix	3 3	2325 2326	Grouped Data, Reviewed	AT4 AT2	AIDa PaG	8 7
2125 2126	Escape (Calculating Pg 20/21) Problems (Calculating Pg 22/23)	AT2 AT2	PaG Or/R	5 6	2225 2226	Wildlife Collection Sum Number Cards	AT2 O.R.	Mix	3	2327	Hanoi (MATH PUZ) Hats (MATH PUZ)	AT4	L&S	5
2127	Tricube Codes	АТЗ	3-D	6	2227	5p a line	AT2	Add	1/2	2328	Quadratic Rules	AT2	Alg	7
2128 2129	Stacking Tens and fives w/s	AT2 AT2	PaG Mul	4 3	2228 2229	Vector Match Quadratics and Primes	AT3 AT2	Tr/V PNo	6 8	2329 2330	The Median Missing Angles w/s	AT4 AT3	AIDa APr	4 5
2130	A Disappearing Act	AT2	Mix	EP	2230		AT3	A&P	1/2	2000	mooning / migroo w/o			·
2131	Filing Cards w/s	AT2	PV/N	3	2231	Hexiamonds	AT3	PSh	5	2332	Decimals on a Number Line w/s	AT2	Dec	3
2132 2133	Cutting Corners Out of 100 w/s	AT3 AT2	3-D Per	7 3	2232 2233	Cut a Cube Cafe Menu	AT3 AT2	3-D Mix	7 1/2	2333 2334	Quiz Times w/s Beat the code	AT2 AT2	Mul Alg	3 5
2134	Similar Rectangles?	AT2	Rat	6	2234	Defining Regions	AT2	Gra	8	2335	Using Decimals	AT2	Dec	3
2135	Grey Areas What could x be?	AT3 AT2	CiM Equ	EP 7	2235 2236	Headlines 25% of What?	AT4 AT2	DDa Per	6 5	2336	Comparing Ratios	AT2	Rat	5
2136 2137	Using Sine and Cosine 1	AT3	Trig	8	2237	Words Won't Fail Me w/s	AT2	Alg	6	2338	Decimal Search w/s	AT2	Dec	4
2138	Which Hand Works Hardest?	AT4	CDa	6	2238	What is the perimeter?	AT3	A&P	1/2	2339	2 x Table w/s	AT2		1/2
2139 2140	Tricube Symmetries Quadratic Solutions	AT3 AT2	Ref Gra	6 EP	2239 2240	Putting in Order w/s Ask Me Another w/s	AT2 AT3	PV/N PSh	3 6	2340 2341	3 x Table w/s 4 x Table w/s	AT2 AT2	Mul Mul	3 3
2141	Constructive Designs	AT3	Dra	7	2241	Cuts to Pieces	AT2	PaG	5	2342	5 x Table w/s	AT2	Mul	3
2142	Making Circles	AT3	CiM	5	2242	Decimal Flags w/s Who's Rule, Okay?	AT2 AT2	Dec	6 7	2343 2344	6 x Table w/s 7 x Table w/s	AT2 AT2	Mul Mul	3 4
2143 2144	Percentages of Money w/s Using Sine and Cosine 2	AT2 AT3	Per Trig	4 8	2243 2244	Packing Balls	AT3	Alg SA/V	EP	2345	8 x Table w/s	AT2	Mul	4
2145	Cross Stitch	AT3	CTr	7	2245	Rows and Columns	AT2	Add	4	2346	9 x Table w/s	AT2	Mul	3
2146 2147	It's not Fair! Odd Animal w/s	AT3 AT2	CiM PNo	4 1/2	2246 2247	Sieve of Eratosthenes More Than, Less Than	AT2 AT2	PNo Equ	5 6	2347 2348	10 x Table w/s 11 x Table w/s	AT2 AT2	Mul Mul	3 3
2148	Transforming Triangles	AT3	CTr	8	2248	Snails' Trails	AT3	Mea	1/2	2349	12 x Table w/s	AT2	Mul	4
2149	Circle Coverage	AT3	CiM	6	2249	Gradients and Intercepts	AT2	Gra	8	2350	End of level Review End of level Review	AT2/3/		3 4
2150 2151	Pizza Paradise The Root of the Problem	AT3 AT2	CiM P&R	7 6	2250 2251	A Puzzling Walk (poster) Put them in their Place w/s	AT4 AT2	L&S Mix	6 7	2351 2352	End of level Review	AT2/3/		5
	,											A123		
2152	How Likely?	AT4	Pro	4	2252	Something and a Half w/s	AT2	Fra	1/2	2353	End of level Review	AT2/3/	4	6
2152 2153	£1 Search w/s	AT2	Pro Add	4 1/2	2252 2253	Something and a Half w/s Solving Inequalities	AT2 AT2	Fra Equ	7	2353 2354	End of level Review End of level Review	AT2/3/	'4 '4	7
2152			Pro	4	2252	Something and a Half w/s	AT2	Fra		2353	End of level Review	AT2/3/	4 4 4	
2152 2153 2154 2155 2156	£1 Search w/s Sum Dice Visualising Fraction Squares	AT2 AT2 AT3 AT2	Pro Add Mix PSh Fra	4 1/2 6 5 6	2252 2253 2254 2255 2256	Something and a Half w/s Solving Inequalities Calculator Brackets Adding One Matching Fractions w/s	AT2 AT2 AT2 AT2 AT2	Fra Equ Mix Fra Fra	7 6 6 3	2353 2354 2355 2356 2357	End of level Review End of level Review End of level Review End of level Review Matching Algebraic Exps w/s	AT2/3/ AT2/3/ AT2/3/ AT2/3/ AT2	/4 /4 /4 /4 Alg	7 8 EP 7
2152 2153 2154 2155 2156 2157	£1 Search w/s Sum Dice Visualising Fraction Squares Some Sums for your Mind w/s	AT2 AT3 AT2 AT2 AT2	Pro Add Mix PSh Fra Mix	4 1/2 6 5 6 7	2252 2253 2254 2255 2256 2257	Something and a Half w/s Solving Inequalities Calculator Brackets Adding One Matching Fractions w/s Right Angled Triangular Prisms	AT2 AT2 AT2 AT2 AT2 AT3	Fra Equ Mix Fra Fra SAV	7 6 6	2353 2354 2355 2356 2357 2358	End of level Review End of level Review End of level Review End of level Review Matching Algebraic Exps w/s Angle Fit w/s	AT2/3/ AT2/3/ AT2/3/ AT2/3/ AT2 AT3	/4 /4 /4	7 8 EP 7 4
2152 2153 2154 2155 2156	£1 Search w/s Sum Dice Visualising Fraction Squares	AT2 AT2 AT3 AT2	Pro Add Mix PSh Fra	4 1/2 6 5 6	2252 2253 2254 2255 2256	Something and a Half w/s Solving Inequalities Calculator Brackets Adding One Matching Fractions w/s	AT2 AT2 AT2 AT2 AT2	Fra Equ Mix Fra Fra	7 6 6 3 5	2353 2354 2355 2356 2357 2358 2359 2360	End of level Review End of level Review End of level Review End of level Review Matching Algebraic Exps w/s	AT2/3/ AT2/3/ AT2/3/ AT2/3/ AT2 AT3 AT2	44 44 44 Alg APr Or/R CTr	7 8 EP 7 4 5
2152 2153 2154 2155 2156 2157 2158 2159 2160	£1 Search w/s Sum Dice Visualising Fraction Squares Some Sums for your Mind w/s Turning Green w/s Permutating Tricubes Folding Fractions	AT2 AT3 AT2 AT2 AT2 AT4 AT4 AT4	Pro Add Mix PSh Fra Mix L&S Pro Fra	4 1/2 6 5 6 7 1/2 8 5	2252 2253 2254 2255 2256 2257 2258 2259	Something and a Half w/s Solving Inequalities Calculator Brackets Adding One Matching Fractions w/s Right Angled Triangular Prisms Substituting into Formulae Multiplication Flags w/s	AT2 AT2 AT2 AT2 AT2 AT3 AT2 AT2	Fra Equ Mix Fra Fra SAV Equ Alg	7 6 6 3 5 8 4	2353 2354 2355 2356 2357 2358 2359 2360 2361	End of level Review End of level Review End of level Review End of level Review Matching Algebraic Exps w/s Angle Fit w/s Approximate Solutions Rotational & Line Symmetry Review Right-angle or not?	AT2/3/ AT2/3/ AT2/3/ AT2/3/ AT2 AT3 AT2 AT3 AT3	44 44 Alg APr Or/R CTr Ang	7 8 EP 7 4 5 5
2152 2153 2154 2155 2156 2157 2158 2159 2160 2161	£1 Search w/s Sum Dice Visualising Fraction Squares Some Sums for your Mind w/s Turning Green w/s Permutating Tricubes	AT2 AT3 AT2 AT2 AT2 AT4 AT4	Pro Add Mix PSh Fra Mix L&S Pro	4 1/2 6 5 6 7 1/2 8	2252 2253 2254 2255 2256 2257 2258	Something and a Half w/s Solving Inequalities Calculator Brackets Adding One Matching Fractions w/s Right Angled Triangular Prisms Substituting into Formulae	AT2 AT2 AT2 AT2 AT2 AT3 AT2	Fra Equ Mix Fra Fra SAV Equ	7 6 6 3 5	2353 2354 2355 2356 2357 2358 2359 2360	End of level Review End of level Review End of level Review End of level Review Matching Algebraic Exps w/s Angle Fit w/s Approximate Solutions Rotational & Line Symmetry Review	AT2/3/ AT2/3/ AT2/3/ AT2/3/ AT2 AT3 AT2	44 44 44 Alg APr Or/R CTr	7 8 EP 7 4 5
2152 2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163	£1 Search w/s Sum Dice Visualising Fraction Squares Some Sums for your Mind w/s Turning Green w/s Permutating Tricubes Folding Fractions Shape Names w/s Angles and Triangles Geometry Facts	AT2 AT3 AT2 AT2 AT4 AT4 AT4 AT3 AT3 O.R.	Pro Add Mix PSh Fra Mix L&S Pro Fra PSh APr	4 1/2 6 5 6 7 1/2 8 5 6	2252 2253 2254 2255 2256 2257 2258 2259 2261 2262 2263	Something and a Half w/s Solving Inequalities Calculator Brackets Adding One Matching Fractions w/s Right Angled Triangular Prisms Substituting into Formulae Multiplication Flags w/s Shape-Tiles w/s Find the Route w/s Spreadsheet Squares	AT2 AT2 AT2 AT2 AT3 AT2 AT2 AT3 AT2 AT3 AT2 AT2	Fra Equ Mix Fra Fra SAV Equ Alg Tr/V Mix Mul	7 6 6 3 5 8 4 1/2 3 6	2353 2354 2355 2356 2357 2358 2359 2360 2361 2362 2363 2364	End of level Review End of level Review End of level Review End of level Review Matching Algebraic Exps w/s Angle Fit w/s Approximate Solutions Rotational & Line Symmetry Review Right-angle or not? Decimal Routes w/s Conversion Pack 1 Decimal Playing Cards	AT2/3/ AT2/3/ AT2/3/ AT2 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 O.R.	44 44 44 4Alg APr Or/R CTr Ang Dec Rat	7 8 EP 7 4 5 5 1/2 5
2152 2153 2154 2155 2156 2157 2158 2159 2160 2161 2162	£1 Search w/s Sum Dice Visualising Fraction Squares Some Sums for your Mind w/s Turning Green w/s Permutating Tricubes Folding Fractions Shape Names w/s Angles and Triangles	AT2 AT3 AT2 AT2 AT4 AT4 AT4 AT3 AT3	Pro Add Mix PSh Fra Mix L&S Pro Fra PSh	4 1/2 6 5 6 7 1/2 8 5	2252 2253 2254 2255 2256 2257 2258 2259 2261 2262 2263 2264	Something and a Half w/s Solving Inequalities Calculator Brackets Adding One Matching Fractions w/s Right Angled Triangular Prisms Substituting into Formulae Multiplication Flags w/s Shape-Tiles w/s Find the Route w/s Spreadsheet Squares Plus and Minus Grids w/s	AT2 AT2 AT2 AT2 AT3 AT2 AT2 AT3 AT2 AT2 AT2 AT2	Fra Equ Mix Fra Fra SAV Equ Alg TrV Mix Mul Mix	7 6 6 3 5 8 4	2353 2354 2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365	End of level Review End of level Review End of level Review End of level Review Matching Algebraic Exps w/s Angle Fit w/s Approximate Solutions Rotational & Line Symmetry Review Right-angle or not? Decimal Routes w/s Conversion Pack 1 Decimal Playing Cards Higher Decimal Win	AT2/3, AT2/3, AT2/3, AT2 AT2 AT3 AT2 AT3 AT3 AT2 AT3 O.R. AT2	44 44 44 44 4Alg APr Or/R CTr Ang Dec Rat	7 8 EP 7 4 5 5 1/2 5
2152 2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163	£1 Search w/s Sum Dice Visualising Fraction Squares Some Sums for your Mind w/s Turning Green w/s Permutating Tricubes Folding Fractions Shape Names w/s Angles and Triangles Geometry Facts	AT2 AT3 AT2 AT2 AT4 AT4 AT4 AT3 AT3 O.R.	Pro Add Mix PSh Fra Mix L&S Pro Fra PSh APr DDa Gra	4 1/2 6 5 6 7 1/2 8 5 5 6 7 5 6 7 8 5 6	2252 2253 2254 2255 2256 2257 2258 2259 2261 2262 2263	Something and a Half w/s Solving Inequalities Calculator Brackets Adding One Matching Fractions w/s Right Angled Triangular Prisms Substituting into Formulae Multiplication Flags w/s Shape-Tiles w/s Find the Route w/s Spreadsheet Squares	AT2 AT2 AT2 AT2 AT3 AT2 AT2 AT3 AT2 AT2 AT2 AT2 AT2 AT2	Fra Equ Mix Fra Fra SAV Equ Alg Tr/V Mix Mul Mix PNo PNo	7 6 6 3 5 8 4 1/2 3 6 3 8 EP	2353 2354 2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367	End of level Review End of level Review End of level Review End of level Review Matching Algebraic Exps w/s Angle Fit w/s Approximate Solutions Rotational & Line Symmetry Review Right-angle or not? Decimal Routes w/s Conversion Pack 1 Decimal Playing Cards Higher Decimal Win Decimal Difference Sixteen Quadrilaterals	AT2/3/ AT2/3/ AT2/3/ AT2/3/ AT2 AT3 AT2 /AT3 AT3 AT3 AT2 AT3 O.R. AT2 AT2	44 44 44 Alg APr Or/R CTr Ang Dec Rat Or/R Dec PSh	7 8 EP 7 4 5 5 1/2 5 6 5
2152 2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164	£1 Search w/s Sum Dice Visualising Fraction Squares Some Sums for your Mind w/s Turning Green w/s Permutating Tricubes Folding Fractions Shape Names w/s Angles and Triangles Geometry Facts Information Displayed Matching Equations Range of Area	AT2 AT3 AT2 AT4 AT4 AT4 AT3 AT3 O.R. AT4	Pro Add Mix PSh Fra Mix L&S Pro Fra PSh APr DDa Gra Or/R	4 1/2 6 5 6 7 1/2 8 5 5 6 7 5 6 7 8 5 6 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	2252 2253 2254 2255 2256 2257 2258 2259 2261 2262 2263 2264 2265 2266 2267	Something and a Half w/s Solving Inequalities Calculator Brackets Adding One Matching Fractions w/s Right Angled Triangular Prisms Substituting into Formulae Multiplication Flags w/s Shape-Tiles w/s Find the Route w/s Spreadsheet Squares Plus and Minus Grids w/s Rational Numbers Irrational Numbers Introducing Ratio	AT2 AT2 AT2 AT2 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2	Fra Equ Mix Fra Fra SAV Equ Alg Tr/V Mix Mul Mix PNo PNo Rat	7 6 6 3 5 8 4 1/2 3 6 3 8 EP 5	2353 2354 2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368	End of level Review End of level Review End of level Review End of level Review Matching Algebraic Exps w/s Angle Fit w/s Approximate Solutions Rotational & Line Symmetry Review Right-angle or not? Decimal Routes w/s Conversion Pack 1 Decimal Playing Cards Higher Decimal Win Decimal Difference Sixteen Quadrilaterals Matching Decimals	AT2/3/ AT2/3/ AT2/3/ AT2 AT3 AT2 AT3 AT3 AT3 AT2 AT3 O.R. AT2 AT3 AT2 AT3	44444444444444444444444444444444444444	7 8 EP 7 4 5 5 1/2 5 5 6 5 4
2152 2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164	£1 Search w/s Sum Dice Visualising Fraction Squares Some Sums for your Mind w/s Turning Green w/s Permutating Tricubes Folding Fractions Shape Names w/s Angles and Triangles Geometry Facts Information Displayed Matching Equations	AT2 AT3 AT2 AT4 AT4 AT4 AT3 AT3 O.R. AT4	Pro Add Mix PSh Fra Mix L&S Pro Fra PSh APr DDa Gra	4 1/2 6 5 6 7 1/2 8 5 5 6 7 5 6 7 8 5 6	2252 2253 2254 2255 2256 2257 2258 2259 2261 2262 2263 2264 2265 2266	Something and a Half w/s Solving Inequalities Calculator Brackets Adding One Matching Fractions w/s Right Angled Triangular Prisms Substituting into Formulae Multiplication Flags w/s Shape-Tiles w/s Find the Route w/s Spreadsheet Squares Plus and Minus Grids w/s Rational Numbers Irrational Numbers	AT2 AT2 AT2 AT2 AT3 AT2 AT2 AT3 AT2 AT2 AT2 AT2 AT2 AT2	Fra Equ Mix Fra Fra SAV Equ Alg Tr/V Mix Mul Mix PNo PNo	7 6 6 3 5 8 4 1/2 3 6 3 8 EP	2353 2354 2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367	End of level Review End of level Review End of level Review End of level Review Matching Algebraic Exps w/s Angle Fit w/s Approximate Solutions Rotational & Line Symmetry Review Right-angle or not? Decimal Routes w/s Conversion Pack 1 Decimal Playing Cards Higher Decimal Win Decimal Difference Sixteen Quadrilaterals	AT2/3/ AT2/3/ AT2/3/ AT2/3/ AT2 AT3 AT2 /AT3 AT3 AT3 AT2 AT3 O.R. AT2 AT2	44 44 44 Alg APr Or/R CTr Ang Dec Rat Or/R Dec PSh	7 8 EP 7 4 5 5 1/2 5 6 5
2152 2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2166 2167 2168 2169 2170	£1 Search w/s Sum Dice Visualising Fraction Squares Some Sums for your Mind w/s Turning Green w/s Permutating Tricubes Folding Fractions Shape Names w/s Angles and Triangles Geometry Facts Information Displayed Matching Equations Range of Area Cube Root Calculator Pop of Britain 1880 and 1980 Shape Up	AT2 AT3 AT2 AT4 AT4 AT4 AT3 AT3 O.R. AT4 AT2 AT3 AT2 AT3 AT2 AT4 AT4	Pro Add Mix PSh Fra Mix L&S Pro Fra PSh APr DDa Gra Or/R P&R DDa PSh	4 1/2 6 5 6 7 1/2 8 5 5 6 7 6 7 8 5 6 7 6 7 6 7 6 6 7 6 6 7 6 6 7 6 6 7 7 6 7 6 7 6 7 6 7 6 7 6 7 7 6 7 7 6 7 7 7 6 7	2252 2253 2254 2255 2256 2257 2258 2259 2261 2262 2263 2264 2265 2266 2267 2268 2269 2270	Something and a Half w/s Solving Inequalities Calculator Brackets Adding One Matching Fractions w/s Right Angled Triangular Prisms Substituting into Formulae Multiplication Flags w/s Shape-Tiles w/s Find the Route w/s Spreadsheet Squares Plus and Minus Grids w/s Rational Numbers Irrational Numbers Introducing Ratio Logo is Amazing Amazing Logo Measuring Pencils	AT2 AT2 AT2 AT2 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT3 AT3 AT3	Fra Equ Mix Fra Fra SAV Equ Alg Tr/V Mix Mix PNo Rat Ang Ang Mea	7 6 6 3 5 8 4 1/2 3 6 3 8 EP 5 4 5 4	2353 2354 2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2369 2370 2371	End of level Review Matching Algebraic Exps w/s Angle Fit w/s Approximate Solutions Rotational & Line Symmetry Review Right-angle or not? Decimal Routes w/s Conversion Pack 1 Decimal Playing Cards Higher Decimal Win Decimal Difference Sixteen Quadrilaterals Matching Decimals Decimal Sort Conversion Pack 2 Rounding to 10	AT2/3/ AT2/3/ AT2/3/ AT2 AT3 AT2 AT3 AT2 AT3 O.R. AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3	44444444444444444444444444444444444444	7 8 EP 7 4 5 5 5 1/2 5 5 6 5 4 4 6 3
2152 2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2166 2167 2168 2169 2170 2171	£1 Search w/s Sum Dice Visualising Fraction Squares Some Sums for your Mind w/s Turning Green w/s Permutating Tricubes Folding Fractions Shape Names w/s Angles and Triangles Geometry Facts Information Displayed Matching Equations Range of Area Cube Root Calculator Pop of Britain 1880 and 1980 Shape Up Pie Chart Match w/s	AT2 AT3 AT2 AT4 AT4 AT4 AT3 AT3 O.R. AT4 AT2 AT3 AT2 AT3 AT2 AT4 AT4	Pro Add Mix PSh Fra Mix L&S Pro Fra PSh APr DDa Gra Or/R P&R DDa PSh DDa	4 1/2 6 5 6 7 1/2 8 5 5 6 7	2252 2253 2254 2255 2256 2257 2258 2259 2261 2262 2263 2264 2265 2266 2267 2268 2269 2270 2271	Something and a Half w/s Solving Inequalities Calculator Brackets Adding One Matching Fractions w/s Right Angled Triangular Prisms Substituting into Formulae Multiplication Flags w/s Shape-Tiles w/s Find the Route w/s Spreadsheet Squares Plus and Minus Grids w/s Rational Numbers Irrational Numbers Introducing Ratio Logo is Amazing Amazing Logo Measuring Pencils I've got the Power	AT2 AT2 AT2 AT2 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT3 AT3 AT3 AT3	Fra Equ Mix Fra SAV Equ Alg Tr/V Mix De PNo Rat Ang Mea P&R	7 6 6 3 5 8 4 1/2 3 6 3 8 EP 5 4 8	2353 2354 2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2369 2370 2371	End of level Review Matching Algebraic Exps w/s Angle Fit w/s Approximate Solutions Rotational & Line Symmetry Review Right-angle or not? Decimal Routes w/s Conversion Pack 1 Decimal Playing Cards Higher Decimal Win Decimal Difference Sixteen Quadrilaterals Matching Decimals Decimal Sort Conversion Pack 2 Rounding to 10 Powers of Ten Flags w/s	AT2/3/ AT2/3/ AT2/3/ AT2 AT3 AT2 AT3 AT3 AT2 AT3 O.R. AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3	44444444444444444444444444444444444444	7 8 EP 7 4 5 5 5 1/2 5 5 6 5 4 4 6
2152 2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2166 2167 2168 2169 2170	£1 Search w/s Sum Dice Visualising Fraction Squares Some Sums for your Mind w/s Turning Green w/s Permutating Tricubes Folding Fractions Shape Names w/s Angles and Triangles Geometry Facts Information Displayed Matching Equations Range of Area Cube Root Calculator Pop of Britain 1880 and 1980 Shape Up	AT2 AT3 AT2 AT4 AT4 AT4 AT3 AT3 O.R. AT4 AT2 AT3 AT2 AT3 AT2 AT4 AT4	Pro Add Mix PSh Fra Mix L&S Pro Fra PSh APr DDa Gra Or/R P&R DDa PSh	4 1/2 6 5 6 7 1/2 8 5 5 6 7 6 5 6 7 6 7 6 5 6 7 6 6 7 6 6 6 7 6 6 7 6 6 7 6 6 7 7 6 7 7 6 7 6 7 7 7 8 7 6 7 6	2252 2253 2254 2255 2256 2257 2258 2259 2261 2262 2263 2264 2265 2266 2267 2268 2269 2270	Something and a Half w/s Solving Inequalities Calculator Brackets Adding One Matching Fractions w/s Right Angled Triangular Prisms Substituting into Formulae Multiplication Flags w/s Shape-Tiles w/s Find the Route w/s Spreadsheet Squares Plus and Minus Grids w/s Rational Numbers Irrational Numbers Introducing Ratio Logo is Amazing Amazing Logo Measuring Pencils	AT2 AT2 AT2 AT2 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT3 AT3 AT3 AT3 AT3 AT2 AT3	Fra Equ Mix Fra SAV Equ Alg Tr/V Mix PNo Rat Ang Ang Ang Ang Ang Seq	7 6 6 3 5 8 4 1/2 3 6 3 8 P 5 4 5 4 8 7 5	2353 2354 2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2369 2370 2371 2372 2373 2374	End of level Review Matching Algebraic Exps w/s Angle Fit w/s Approximate Solutions Rotational & Line Symmetry Review Right-angle or not? Decimal Routes w/s Conversion Pack 1 Decimal Playing Cards Higher Decimal Win Decimal Difference Sixteen Quadrilaterals Matching Decimals Decimal Sort Conversion Pack 2 Rounding to 10 Powers of Ten Flags w/s Queens (MOVE) Equivalent Fractions Pairs	AT2/3/ AT2/3/ AT2/3/ AT2/3/ AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT2 AT3 AT2 AT2 AT3 AT2 AT2 AT3 AT2 AT2 AT2 AT2 AT2	444444Alg APr Or/R CTr Ang Dec Rat Or/R Dec Rat Or/R Dec Fra	7 8 EP 7 4 5 5 5 5 5 5 5 5 6 5 4 4 6 3 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
2152 2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2166 2167 2168 2169 2170 2171 2172 2173 2174	£1 Search w/s Sum Dice Visualising Fraction Squares Some Sums for your Mind w/s Turning Green w/s Permutating Tricubes Folding Fractions Shape Names w/s Angles and Triangles Geometry Facts Information Displayed Matching Equations Range of Area Cube Root Calculator Pop of Britain 1880 and 1980 Shape Up Pie Chart Match w/s Two Down Unmarked Angles w/s The Mode w/s	AT2 AT3 AT2 AT4 AT4 AT4 AT3 AT3 O.R. AT4 AT2 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4	Pro Add Mix PSh Fra Mix S Pro Fra PSh APr DDa Gra Or/R DDa P&R DDa Or/R APr AIDa	4 1/2 6 5 6 7 1/2 8 5 5 6 7 6 5 6 7 6 7 6 5 6 7 6 6 7 6 7 6	2252 2253 2254 2255 2256 2257 2258 2259 2261 2262 2263 2264 2265 2266 2267 2268 2269 2270 2271 2272 2273 2274	Something and a Half w/s Solving Inequalities Calculator Brackets Adding One Matching Fractions w/s Right Angled Triangular Prisms Substituting into Formulae Multiplication Flags w/s Shape-Tiles w/s Find the Route w/s Spreadsheet Squares Plus and Minus Grids w/s Rational Numbers Irrational Numbers Introducing Ratio Logo is Amazing Amazing Logo Measuring Pencils I've got the Power Lines, Regions and Inequalities Looping Chains abc w/s	AT2 AT2 AT2 AT2 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT2 AT3 AT3 AT3 AT3 AT3 AT2 AT2 AT3 AT3 AT3 AT3 AT3 AT3 AT3 AT3	Fra Equ Mix Fra SAV Equ Alg Tr/V Mix PNo Rat Ang Ang Ang Ang Ang Ang Ang Alg	7 6 6 3 5 8 4 1/2 3 6 3 8 P 5 4 5 4 8 7 5 5	2353 2354 2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2369 2370 2371 2372 2373 2374 2375	End of level Review Matching Algebraic Exps w/s Angle Fit w/s Approximate Solutions Rotational & Line Symmetry Review Right-angle or not? Decimal Routes w/s Conversion Pack 1 Decimal Playing Cards Higher Decimal Win Decimal Difference Sixteen Quadrilaterals Matching Decimals Decimal Sort Conversion Pack 2 Rounding to 10 Powers of Ten Flags w/s Queens (MOVE) Equivalent Fractions Pairs Polygons in Circles	AT2/3/ AT2/3/ AT2/3/ AT2/3/ AT2 AT3 AT3 AT3 AT3 AT2 AT3 AT2 AT3 AT2 AT2 AT3 AT2 AT2 AT3 AT2 AT2 AT3 AT2 AT3	44444444444444444444444444444444444444	7 8 EP 7 4 5 5 5 2 5 5 5 5 5 6 5 4 4 6 3 5 5 6 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5
2152 2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2166 2167 2168 2169 2171 2172 2173	£1 Search w/s Sum Dice Visualising Fraction Squares Some Sums for your Mind w/s Turning Green w/s Permutating Tricubes Folding Fractions Shape Names w/s Angles and Triangles Geometry Facts Information Displayed Matching Equations Range of Area Cube Root Calculator Pop of Britain 1880 and 1980 Shape Up Pie Chart Match w/s Two Down Unmarked Angles w/s	AT2 AT3 AT2 AT4 AT4 AT4 AT3 AT3 O.R. AT4 AT2 AT3 AT4 AT4 AT3 AT4 AT3 AT4 AT3	Pro Add Mix PSh Fra Mix L&S Pro Fra PSh APr DDa Gra Or/R DDa Or/R APr	4 1/2 6 5 6 7 1/2 8 5 5 6 6 7 6 5 6 7 6 5 6 7 6 7 6 7 6 7 6	2252 2253 2254 2255 2256 2257 2258 2259 2261 2262 2263 2264 2265 2266 2267 2268 2269 2270 2271 2272 2273	Something and a Half w/s Solving Inequalities Calculator Brackets Adding One Matching Fractions w/s Right Angled Triangular Prisms Substituting into Formulae Multiplication Flags w/s Shape-Tiles w/s Find the Route w/s Spreadsheet Squares Plus and Minus Grids w/s Rational Numbers Irrational Numbers Introducing Ratio Logo is Amazing Amazing Logo Measuring Pencils I've got the Power Lines, Regions and Inequalities Looping Chains	AT2 AT2 AT2 AT2 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT3 AT3 AT3 AT3 AT3 AT2 AT3	Fra Equ Mix Fra SAV Equ Alg Tr/V Mix PNo Rat Ang Ang Ang Ang Ang Seq	7 6 6 3 5 8 4 1/2 3 6 3 8 P 5 4 5 4 8 7 5	2353 2354 2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2369 2370 2371 2372 2373 2374	End of level Review Matching Algebraic Exps w/s Angle Fit w/s Approximate Solutions Rotational & Line Symmetry Review Right-angle or not? Decimal Routes w/s Conversion Pack 1 Decimal Playing Cards Higher Decimal Win Decimal Difference Sixteen Quadrilaterals Matching Decimals Decimal Sort Conversion Pack 2 Rounding to 10 Powers of Ten Flags w/s Queens (MOVE) Equivalent Fractions Pairs	AT2/3/ AT2/3/ AT2/3/ AT2/3/ AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT2 AT3 AT2 AT2 AT3 AT2 AT2 AT3 AT2 AT2 AT2 AT2 AT2	444444Alg APr Or/R CTr Ang Dec Rat Or/R Dec Rot/R Dec Rot/R Dec Tra Dra	7 8 EP 7 4 5 5 5 5 5 5 5 5 6 5 4 4 6 3 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
2152 2153 2154 2155 2156 2157 2158 2159 2161 2162 2163 2164 2168 2169 2170 2171 2172 2173 2174 2175 2176 2177	£1 Search w/s Sum Dice Visualising Fraction Squares Some Sums for your Mind w/s Turning Green w/s Permutating Tricubes Folding Fractions Shape Names w/s Angles and Triangles Geometry Facts Information Displayed Matching Equations Range of Area Cube Root Calculator Pop of Britain 1880 and 1980 Shape Up Pie Chart Match w/s Two Down Unmarked Angles w/s The Mode w/s Grouping Data Talking (poster) Population Squares	AT2 AT3 AT2 AT4 AT4 AT2 AT3 AT3 AT4 AT4 AT3 AT4 AT4 AT4 AT4 AT4 AT4 AT4 AT4 AT4 AT4	Pro Add Mix PSh Fra Mix L&S Pro Fra PSh APr DDa Gra Of/R DDa PSh DDa PSh APr AIDa AIDa AIDa	4 1/2 6 5 6 7 1/2 8 5 5 6 5 6 7 6 5 6 7 6 5 6 7 6 7 6 7 6 7	2252 2253 2254 2255 2256 2257 2258 2259 2261 2262 2263 2264 2265 2266 2267 2268 2269 2270 2271 2272 2273 2274 2275 2276 2277	Something and a Half w/s Solving Inequalities Calculator Brackets Adding One Matching Fractions w/s Right Angled Triangular Prisms Substituting into Formulae Multiplication Flags w/s Shape-Tiles w/s Find the Route w/s Spreadsheet Squares Plus and Minus Grids w/s Rational Numbers Irrational Numbers Irrational Numbers Introducing Ratio Logo is Amazing Amazing Logo Measuring Pencils I've got the Power Lines, Regions and Inequalities Looping Chains abc w/s Algebra Problems Curvy Tiles in LOGO Brackets	AT2 AT2 AT2 AT2 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT3 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2	Fra Equ Mix Fra V Equ Alg Tr/X Mul X No Rat Ang Alg P&ra Alg Dra Alg Dra Alg	7 6 6 3 5 8 4 1/2 3 6 3 8 P 5 4 5 4 8 7 5 5 8 6 7	2353 2354 2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2370 2371 2372 2373 2374 2375 2376 2377 2378	End of level Review Matching Algebraic Exps w/s Angle Fit w/s Approximate Solutions Rotational & Line Symmetry Review Right-angle or not? Decimal Routes w/s Conversion Pack 1 Decimal Playing Cards Higher Decimal Win Decimal Difference Sixteen Quadrilaterals Matching Decimals Decimal Sort Conversion Pack 2 Rounding to 10 Powers of Ten Flags w/s Queens (MOVE) Equivalent Fractions Pairs Polygons in Circles Maths in Your Head TenSprint(NUM) Matching Fractions(NUM)	AT2/3/ AT2/3/ AT2/3/ AT2/3/ AT2 AT3 AT3 AT3 AT2 AT3 AT2 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2	44444 Alg APr Or/R CTr Angc Rat Or/R Dec Rat Or/R Dec Rat Or/R Dec Add Fra	7 8 P 7 4 5 5 5 5 6 5 4 4 6 3 5 5 6 1/2 5
2152 2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2166 2167 2188 2170 2171 2172 2173 2174 2175 2176 2177	£1 Search w/s Sum Dice Visualising Fraction Squares Some Sums for your Mind w/s Turning Green w/s Permutating Tricubes Folding Fractions Shape Names w/s Angles and Triangles Geometry Facts Information Displayed Matching Equations Range of Area Cube Root Calculator Pop of Britain 1880 and 1980 Shape Up Pie Chart Match w/s Two Down Unmarked Angles w/s The Mode w/s Grouping Data Talking (poster) Population Projections Volumes	AT2 AT3 AT2 AT4 AT4 AT2 AT3 AT3 O.R. AT4 AT3 AT4 AT3 AT4 AT4 AT4 AT4 AT4 AT4 AT4 AT4 AT4 AT4	Pro Add Mix PSh Fra Mix L&S Pro Fra PSh APr DDa Gra Or/R DDa Or/R AIDa AIDa SAV	4 1/2 6 5 6 7 1/2 8 5 5 6 5 6 7 6 5 6 7 7 8 5 5 6 6 7 6 7 6 7 6 7 6 7 6 7 6 7 6 7 6	2252 2253 2254 2255 2256 2257 2258 2259 2261 2262 2263 2264 2265 2266 2267 2268 2270 2271 2272 2273 2274 2275 2276 2277 2278	Something and a Half w/s Solving Inequalities Calculator Brackets Adding One Matching Fractions w/s Right Angled Triangular Prisms Substituting into Formulae Multiplication Flags w/s Shape-Tiles w/s Find the Route w/s Spreadsheet Squares Plus and Minus Grids w/s Rational Numbers Irrational Numbers Irrational Numbers Introducing Ratio Logo is Amazing Amazing Logo Measuring Pencils I've got the Power Lines, Regions and Inequalities Looping Chains abc w/s Algebra Problems Curvy Tiles in LOGO Brackets Mapping Jigsaw w/s	AT2 AT2 AT2 AT2 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT3 AT3 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2	Fra Equ Mix Fra SAV Equ Alg Tr/X Mix No PNo Ang	7 6 6 3 5 8 4 1/2 3 6 3 8 P 5 4 5 4 8 7 5 5 8 6 7 3	2353 2354 2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2370 2371 2372 2373 2374 2375 2376 2377 2378 2379	End of level Review Matching Algebraic Exps w/s Angle Fit w/s Approximate Solutions Rotational & Line Symmetry Review Right-angle or not? Decimal Routes w/s Conversion Pack 1 Decimal Playing Cards Higher Decimal Win Decimal Difference Sixteen Quadrilaterals Matching Decimals Decimal Sort Conversion Pack 2 Rounding to 10 Powers of Ten Flags w/s Queens (MOVE) Equivalent Fractions Pairs Polygons in Circles Maths in Your Head TenSprint(NUM) Matching Fractions (NUM) Ordering Fractions (NUM)	AT2/3/ AT2/3/ AT2/3/ AT2/3/ AT2 AT3 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT3 AT2 AT2 AT3 AT2 AT3 AT2 AT2 AT3 AT2 AT2 AT3 AT2 AT2 AT3 AT2 AT2 AT3 AT2 AT2 AT3 AT2 AT2 AT3 AT2 AT2 AT2 AT3 AT2 AT2 AT3 AT2 AT2 AT2 AT3 AT2 AT3 AT2 AT2 AT3 AT2 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT2 AT3 AT2 AT2 AT2 AT2 AT2 AT3 AT2 AT2 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2	44444 Alg APr Or/R CTr Angc Rat Or/R Dec Rat Or/R Dec Rat Or/R Dec Fra Add Fra Fra	7 8 P 7 4 5 5 5 5 6 5 4 4 6 3 5 5 6 1/5 5
2152 2153 2154 2155 2156 2157 2158 2159 2161 2162 2163 2164 2168 2169 2170 2171 2172 2173 2174 2175 2176 2177	£1 Search w/s Sum Dice Visualising Fraction Squares Some Sums for your Mind w/s Turning Green w/s Permutating Tricubes Folding Fractions Shape Names w/s Angles and Triangles Geometry Facts Information Displayed Matching Equations Range of Area Cube Root Calculator Pop of Britain 1880 and 1980 Shape Up Pie Chart Match w/s Two Down Unmarked Angles w/s The Mode w/s Grouping Data Talking (poster) Population Squares	AT2 AT3 AT2 AT4 AT4 AT2 AT3 AT3 AT4 AT4 AT3 AT4 AT4 AT4 AT4 AT4 AT4 AT4 AT4 AT4 AT4	Pro Add Mix PSh Fra Mix L&S Pro Fra PSh APr DDa Gra Of/R DDa PSh DDa PSh APr AIDa AIDa AIDa	4 1/2 6 5 6 7 1/2 8 5 5 6 5 6 7 6 5 6 7 6 5 6 7 6 7 6 7 6 7	2252 2253 2254 2255 2256 2257 2258 2259 2261 2262 2263 2264 2265 2266 2267 2268 2269 2270 2271 2272 2273 2274 2275 2276 2277	Something and a Half w/s Solving Inequalities Calculator Brackets Adding One Matching Fractions w/s Right Angled Triangular Prisms Substituting into Formulae Multiplication Flags w/s Shape-Tiles w/s Find the Route w/s Spreadsheet Squares Plus and Minus Grids w/s Rational Numbers Irrational Numbers Irrational Numbers Introducing Ratio Logo is Amazing Amazing Logo Measuring Pencils I've got the Power Lines, Regions and Inequalities Looping Chains abc w/s Algebra Problems Curvy Tiles in LOGO Brackets	AT2 AT2 AT2 AT2 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT3 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2	Fra Equ Mix Fra V Equ Alg Tr/V x Mix No PNat Ang	7 6 6 3 5 8 4 1/2 3 6 3 8 P 5 4 5 4 8 7 5 5 8 6 7 3 1/2 3	2353 2354 2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2370 2371 2372 2373 2374 2375 2376 2377 2378 2379 2380 2381	End of level Review Matching Algebraic Exps w/s Angle Fit w/s Approximate Solutions Rotational & Line Symmetry Review Right-angle or not? Decimal Routes w/s Conversion Pack 1 Decimal Playing Cards Higher Decimal Win Decimal Difference Sixteen Quadrilaterals Matching Decimals Decimal Sort Conversion Pack 2 Rounding to 10 Powers of Ten Flags w/s Queens (MOVE) Equivalent Fractions Pairs Polygons in Circles Maths in Your Head TenSprint(NUM) Matching Fractions (NUM) Ordering Fractions (NUM) Number Lines (NUM)	AT2/3/ AT2/3/ AT2/3/ AT2/3/ AT3 AT3 AT3 AT3 AT2 AT3 AT3 AT2 AT2 AT3 AT2 AT3 AT2 AT2 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2	44444 Alg rAPr Alg CTr Ang CTr Ang CPSh Alg CPSh CPSh CPSh CPSh CPSh CPSh CPSh CPSh	7 8 P 7 4 5 5 5 5 6 5 4 4 6 3 5 5 6 1/5 5 4 6
2152 2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2166 2167 2170 2171 2172 2173 2174 2175 2177 2178 2177 2178 2179	£1 Search w/s Sum Dice Visualising Fraction Squares Some Sums for your Mind w/s Turning Green w/s Permutating Tricubes Folding Fractions Shape Names w/s Angles and Triangles Geometry Facts Information Displayed Matching Equations Range of Area Cube Root Calculator Pop of Britain 1880 and 1980 Shape Up Pie Chart Match w/s Two Down Unmarked Angles w/s The Mode w/s Grouping Data Talking (poster) Population Projections Volumes Shakes and Adders Big Hand Big Foot?	AT2 AT3 AT2 AT4 AT4 AT3 AT3 O.R. AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT4 AT5 AT5 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7	Pro Add Mix PSh Fra Mix L&S Pro Fra PSh APr DDa Gra Or/R P&R DDa Or/R AIDa AIDa AIDa SA/V DNo CDa	4 1/2 6 5 6 7 1/2 8 5 5 6 5 8 8 6 7 6 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	2252 2253 2254 2255 2256 2257 2258 2259 2261 2262 2263 2264 2265 2266 2267 2268 2270 2271 2272 2273 2274 2275 2276 2277 2278 2279	Something and a Half w/s Solving Inequalities Calculator Brackets Adding One Matching Fractions w/s Right Angled Triangular Prisms Substituting into Formulae Multiplication Flags w/s Shape-Tiles w/s Find the Route w/s Spreadsheet Squares Plus and Minus Grids w/s Rational Numbers Irrational Numbers Irrational Numbers Irrational Pencils I've got the Power Lines, Regions and Inequalities Looping Chains abc w/s Algebra Problems Curvy Tiles in LOGO Brackets Mapping Jigsaw w/s Island Game	AT2 AT2 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT2 AT3 AT2 AT2 AT2 AT3	Fra Equ Mix Fra V Equ Alg Tr/V x Mix No PNat Ang	7 6 6 3 5 8 4 1/2 3 6 3 8 P 5 4 5 4 8 7 5 5 8 6 7 3 1/2	2353 2354 2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2370 2371 2372 2373 2374 2375 2376 2377 2378 2379 2380 2381 2382	End of level Review Matching Algebraic Exps w/s Angle Fit w/s Approximate Solutions Rotational & Line Symmetry Review Right-angle or not? Decimal Routes w/s Conversion Pack 1 Decimal Playing Cards Higher Decimal Win Decimal Difference Sixteen Quadrilaterals Matching Decimals Decimal Sort Conversion Pack 2 Rounding to 10 Powers of Ten Flags w/s Queens (MOVE) Equivalent Fractions Pairs Polygons in Circles Maths in Your Head TenSprint(NUM) Matching Fractions (NUM) Ordering Fractions (NUM) Number Lines (NUM) Areas of Polygons w/s	AT2/3/ AT2/3/ AT2/3/ AT2/3/ AT3 AT3 AT3 AT3 AT3 AT2 AT3 AT3 AT2 AT3 AT3 AT3 AT4 AT2 AT3 AT3 AT4 AT4 AT4 AT4 AT4 AT4 AT4 AT4 AT4 AT4	44444 Alg r Alg CTr Angc Rat Or/R CPSh CPSh CPSh CPSh CPSh CPSh CPSh CPSh	7 8 P 7 4 5 5 2 5 5 6 5 4 4 6 3 5 5 6 2 5 5 4 6 5
2152 2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2166 2167 2170 2171 2172 2173 2174 2175 2177 2177 2178 2177 2178 2179	£1 Search w/s Sum Dice Visualising Fraction Squares Some Sums for your Mind w/s Turning Green w/s Permutating Tricubes Folding Fractions Shape Names w/s Angles and Triangles Geometry Facts Information Displayed Matching Equations Range of Area Cube Root Calculator Pop of Britain 1880 and 1980 Shape Up Pie Chart Match w/s Two Down Unmarked Angles w/s The Mode w/s Grouping Data Talking (poster) Population Projections Volumes Shakes and Adders Big Hand Big Foot? Shongo Networks	AT2 AT3 AT2 AT4 AT4 AT3 AT3 O.R. AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT4 AT5 AT5 AT5 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7	Pro Add Mix PSh Fra Mix L&S Pro Fra PSh APr DDa Gra Or/R DDa Or/R APr AIDa AIDa AIDa SA/V DNo	4 1/2 6 5 6 7 1/2 8 5 5 6 5 8 8 6 7 6 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	2252 2253 2254 2255 2256 2257 2258 2259 2261 2262 2263 2264 2265 2266 2267 2268 2270 2271 2272 2273 2274 2275 2276 2277 2278 2279 2280	Something and a Half w/s Solving Inequalities Calculator Brackets Adding One Matching Fractions w/s Right Angled Triangular Prisms Substituting into Formulae Multiplication Flags w/s Shape-Tiles w/s Find the Route w/s Spreadsheet Squares Plus and Minus Grids w/s Rational Numbers Irrational Numbers Irrational Numbers Irrational Pencils I've got the Power Lines, Regions and Inequalities Looping Chains abc w/s Algebra Problems Curvy Tiles in LOGO Brackets Mapping Jigsaw w/s Island Game Equal Angles	AT2 AT2 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT2 AT3 AT3 AT3 AT3 AT3 AT3 AT3 AT4 AT7	Fra Equ Mix Fra V Equ Alg Tr/V x Mix No PNat Ang	7 6 6 3 5 8 4 1/2 3 6 3 8 P 5 4 5 4 8 7 5 5 8 6 7 3 1/2 3	2353 2354 2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2370 2371 2372 2373 2374 2375 2376 2377 2378 2379 2380 2381	End of level Review Matching Algebraic Exps w/s Angle Fit w/s Approximate Solutions Rotational & Line Symmetry Review Right-angle or not? Decimal Routes w/s Conversion Pack 1 Decimal Playing Cards Higher Decimal Win Decimal Difference Sixteen Quadrilaterals Matching Decimals Decimal Sort Conversion Pack 2 Rounding to 10 Powers of Ten Flags w/s Queens (MOVE) Equivalent Fractions Pairs Polygons in Circles Maths in Your Head TenSprint(NUM) Matching Fractions (NUM) Ordering Fractions (NUM) Number Lines (NUM)	AT2/3/ AT2/3/ AT2/3/ AT2/3/ AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT3 AT2 AT3 AT3 AT2 AT3 AT3 AT2 AT3 AT3 AT3 AT3 AT3 AT3 AT3 AT3 AT3 AT3	44444 Alg rAPr Alg CTr Ang CTr Ang CPSh Alg CPSh CPSh CPSh CPSh CPSh CPSh CPSh CPSh	7 8 P 7 4 5 5 5 5 6 5 4 4 6 3 5 5 6 1/5 5 4 6
2152 2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2166 2167 2170 2171 2172 2173 2174 2175 2177 2178 2177 2178 2179	£1 Search w/s Sum Dice Visualising Fraction Squares Some Sums for your Mind w/s Turning Green w/s Permutating Tricubes Folding Fractions Shape Names w/s Angles and Triangles Geometry Facts Information Displayed Matching Equations Range of Area Cube Root Calculator Pop of Britain 1880 and 1980 Shape Up Pie Chart Match w/s Two Down Unmarked Angles w/s The Mode w/s Grouping Data Talking (poster) Population Projections Volumes Shakes and Adders Big Hand Big Foot?	AT2 AT3 AT2 AT4 AT4 AT3 AT3 O.R. AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT4 AT5 AT5 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7	Pro Add Mix PSh Fra Mix L&S Pro Fra PSh APr DDa Gra Or/R DDa Or/R AIDa AIDa AIDa AIDa CDa PaG	4 1/2 6 5 6 7 1/2 8 5 5 6 5 8 8 6 7 6 5 4 6 4 7 5 5 5 5 5 7 5 5 5 5 7 5 7 5 5 7 5 7	2252 2253 2254 2255 2256 2257 2258 2259 2261 2262 2263 2264 2265 2266 2267 2268 2269 2270 2271 2272 2273 2274 2275 2276 2277 2278 2277 2278 2279 2280 2281	Something and a Half w/s Solving Inequalities Calculator Brackets Adding One Matching Fractions w/s Right Angled Triangular Prisms Substituting into Formulae Multiplication Flags w/s Shape-Tiles w/s Find the Route w/s Spreadsheet Squares Plus and Minus Grids w/s Rational Numbers Irrational Numbers Introducing Ratio Logo is Amazing Amazing Logo Measuring Pencils I've got the Power Lines, Regions and Inequalities Looping Chains abc w/s Algebra Problems Curvy Tiles in LOGO Brackets Mapping Jigsaw w/s Island Game Equal Angles Simultaneous Match Jumping BoxN (SENSE/NO)	AT2 AT2 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT3 AT3 AT3 AT2 AT3	Fra Equ Mix Fra V Equ Alg Tr/V Mul X PNO Rat g Pora Alg Dra Al	7 6 6 3 5 8 4 1/2 3 6 3 8 P 5 4 5 4 8 7 5 5 8 6 7 3 /2 3 7 3 4	2353 2354 2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2370 2371 2372 2373 2374 2375 2376 2377 2378 2379 2380 2381 2382 2383 2384 2385	End of level Review Matching Algebraic Exps w/s Angle Fit w/s Approximate Solutions Rotational & Line Symmetry Review Right-angle or not? Decimal Routes w/s Conversion Pack 1 Decimal Playing Cards Higher Decimal Win Decimal Difference Sixteen Quadrilaterals Matching Decimals Decimal Sort Conversion Pack 2 Rounding to 10 Powers of Ten Flags w/s Queens (MOVE) Equivalent Fractions Pairs Polygons in Circles Maths in Your Head TenSprint(NUM) Matching Fractions (NUM) Number Lines (NUM) Number Lines (NUM) Areas of Polygons w/s Solid Expressions Angles in a Regular Hexagon w/s Nine Nine	AT2/3/ AT2/3/ AT2/3/ AT2/3/ AT2 AT3 AT3 AT3 AT3 AT2 AT3 AT3 AT3 AT3 AT3 AT3 AT3 AT3 AT3 AT3	44444 AlgrAP/R OCTr ADeat Or/R OPSh/R OFR OT/R OFR OT/R Add Frat ASAV PAG	78P7455255 56544635 56 255465854
2152 2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2166 2167 2168 2169 2170 2171 2172 2173 2174 2175 2176 2177 2178 2179 2181 2182 2183 2184	£1 Search w/s Sum Dice Visualising Fraction Squares Some Sums for your Mind w/s Turning Green w/s Permutating Tricubes Folding Fractions Shape Names w/s Angles and Triangles Geometry Facts Information Displayed Matching Equations Range of Area Cube Root Calculator Pop of Britain 1880 and 1980 Shape Up Pie Chart Match w/s Two Down Unmarked Angles w/s The Mode w/s Grouping Data Talking (poster) Population Projections Volumes Shakes and Adders Big Hand Big Foot? Shongo Networks Using Standard Form Powers of Integers	AT2 AT3 AT2 AT4 AT4 AT3 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT4 AT3 AT4 AT4 AT3 AT4 AT4 AT3 AT4 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT3 AT4 AT4 AT5 AT5 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7	Pro Add Mix PSh Fra MixS Pro Fra PSh APr DDa Gra Or/R DDa Or/R DDa AIDa AIDa SA/V DNo CDa P&R P&R P&R	4 1/2 6 5 6 7 1/2 8 5 5 6 5 8 8 6 7 6 5 4 6 4 7 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	2252 2253 2254 2255 2256 2257 2258 2259 2261 2262 2263 2264 2265 2266 2267 2268 2269 2270 2271 2272 2273 2274 2275 2276 2277 2278 2279 2280 2281 2283 2284 2285	Something and a Half w/s Solving Inequalities Calculator Brackets Adding One Matching Fractions w/s Right Angled Triangular Prisms Substituting into Formulae Multiplication Flags w/s Shape-Tiles w/s Find the Route w/s Spreadsheet Squares Plus and Minus Grids w/s Rational Numbers Irrational Numbers Introducing Ratio Logo is Amazing Amazing Logo Measuring Pencils I've got the Power Lines, Regions and Inequalities Looping Chains abc w/s Algebra Problems Curvy Tiles in LOGO Brackets Mapping Jigsaw w/s Island Game Equal Angles Simultaneous Match Jumping BoxN (SENSE/NO) GuessN (SENSE/NO)	AT2 AT2 AT2 AT2 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT3 AT2 AT3 AT3 AT3 AT3 AT3 AT3 AT3 AT3 AT3 AT3	Fra Equix Fra V Equi Mix O O Rat g Alg Dra Alg	7 6 6 3 5 8 4 1/2 3 6 3 8 P 5 4 5 4 8 7 5 5 8 6 7 3 /2 3 7 3 4 5	2353 2354 2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2370 2371 2372 2373 2374 2375 2376 2377 2378 2379 2380 2381 2382 2383 2384 2385 2386	End of level Review Matching Algebraic Exps w/s Angle Fit w/s Approximate Solutions Rotational & Line Symmetry Review Right-angle or not? Decimal Routes w/s Conversion Pack 1 Decimal Playing Cards Higher Decimal Win Decimal Difference Sixteen Quadrilaterals Matching Decimals Decimal Sort Conversion Pack 2 Rounding to 10 Powers of Ten Flags w/s Queens (MOVE) Equivalent Fractions Pairs Polygons in Circles Maths in Your Head TenSprint(NUM) Matching Fractions (NUM) Number Lines (NUM) Number Lines (NUM) Number Lines (NUM) Areas of Polygons w/s Solid Expressions Angles in a Regular Hexagon w/s Nine Nine Nine Multiplication Review	AT2/3/ AT2/3/ AT2/3/ AT2/3/ AT2 AT3 AT3 AT3 AT3 AT2 AT2 AT3 AT2 AT2 AT3 AT2 AT2 AT3 AT2 AT2 AT3 AT2 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2	4444 Alg rAPr/R Or/R Open Add Fra ASAV Pag Mul	78P7455255 56544635 56 2554658546
2152 2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2166 2167 2177 2172 2173 2174 2175 2177 2177 2177 2177 2177 2177 2177	£1 Search w/s Sum Dice Visualising Fraction Squares Some Sums for your Mind w/s Turning Green w/s Permutating Tricubes Folding Fractions Shape Names w/s Angles and Triangles Geometry Facts Information Displayed Matching Equations Range of Area Cube Root Calculator Pop of Britain 1880 and 1980 Shape Up Pie Chart Match w/s Two Down Unmarked Angles w/s The Mode w/s Grouping Data Talking (poster) Population Projections Volumes Shakes and Adders Big Hand Big Foot? Shongo Networks Using Standard Form	AT2 AT3 AT2 AT4 AT4 AT3 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT4 AT5 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7	Pro Add Mix PSh Fra MixS Pro Fra PSh APr DDa Gra Or/R DDa Gra Or/R AIDa AIDa SAV DNo CDa P&R	4 1/2 6 5 6 7 1/2 8 5 5 6 5 8 8 6 7 6 5 4 6 4 7 7 8 5 5 5 5 7 8 7 8 8 7 8 7 8 7 8 7 8	2252 2253 2254 2255 2256 2257 2258 2259 2261 2262 2263 2264 2265 2266 2267 2268 2269 2270 2271 2272 2273 2274 2275 2276 2277 2278 2277 2278 2279 2280 2281	Something and a Half w/s Solving Inequalities Calculator Brackets Adding One Matching Fractions w/s Right Angled Triangular Prisms Substituting into Formulae Multiplication Flags w/s Shape-Tiles w/s Find the Route w/s Spreadsheet Squares Plus and Minus Grids w/s Rational Numbers Irrational Numbers Introducing Ratio Logo is Amazing Amazing Logo Measuring Pencils I've got the Power Lines, Regions and Inequalities Looping Chains abc w/s Algebra Problems Curvy Tiles in LOGO Brackets Mapping Jigsaw w/s Island Game Equal Angles Simultaneous Match Jumping BoxN (SENSE/NO)	AT2 AT2 AT2 AT2 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2	Fra Equ Mix Fra V Equ Alg Tr/V Mul X PNO Rat g Pora Alg Dra Al	7 6 6 3 5 8 4 1/2 3 6 3 8 P 5 4 5 4 8 7 5 5 8 6 7 3 /2 3 7 3 4	2353 2354 2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2370 2371 2372 2373 2374 2375 2376 2377 2378 2379 2380 2381 2382 2383 2384 2385	End of level Review Matching Algebraic Exps w/s Angle Fit w/s Approximate Solutions Rotational & Line Symmetry Review Right-angle or not? Decimal Routes w/s Conversion Pack 1 Decimal Playing Cards Higher Decimal Win Decimal Difference Sixteen Quadrilaterals Matching Decimals Decimal Sort Conversion Pack 2 Rounding to 10 Powers of Ten Flags w/s Queens (MOVE) Equivalent Fractions Pairs Polygons in Circles Maths in Your Head TenSprint(NUM) Matching Fractions (NUM) Number Lines (NUM) Number Lines (NUM) Areas of Polygons w/s Solid Expressions Angles in a Regular Hexagon w/s Nine Nine	AT2/3/ AT2/3/ AT2/3/ AT2/3/ AT2 AT3 AT3 AT3 AT3 AT2 AT3 AT3 AT3 AT3 AT3 AT3 AT3 AT3 AT3 AT3	44444 AlgrAP/R OCTr ADeat Or/R OPSh/R OFR OT/R OFR OT/R Add Frat ASAV PAG	78P7455255 56544635 56 255465854637
2152 2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2168 2169 2170 2171 2172 2173 2174 2175 2176 2177 2178 2179 2181 2182 2183 2184 2186 2187 2188	£1 Search w/s Sum Dice Visualising Fraction Squares Some Sums for your Mind w/s Turning Green w/s Permutating Tricubes Folding Fractions Shape Names w/s Angles and Triangles Geometry Facts Information Displayed Matching Equations Range of Area Cube Root Calculator Pop of Britain 1880 and 1980 Shape Up Pie Chart Match w/s Two Down Unmarked Angles w/s The Mode w/s Grouping Data Talking (poster) Population Projections Volumes Shakes and Adders Big Hand Big Foot? Shongo Networks Using Standard Form Powers of Integers Missing Pieces w/s Pythagoras Plus Population Pyramids	AT2 AT3 AT2 AT4 AT2 AT3 AT3 AT4 AT3 AT4 AT4 AT3 AT4 AT4 AT3 AT4 AT4 AT3 AT4 AT4 AT4 AT4 AT4 AT4 AT4 AT4 AT4 AT4	Pro Add Mix PSh Fra Mix S Pro Fra PSh APr DDa Gra PSh APr DDA AIDA AIDA AIDA SAV DNo CDaG P&R Mul Trig DDa	4 1/2 6 5 6 7 1/2 8 5 5 6 5 8 8 6 7 6 5 4 6 4 7 5 5 5 5 7 8 8 7 1/2 8 7	2252 2253 2254 2255 2256 2257 2258 2259 2261 2262 2263 2264 2265 2266 2267 2268 2270 2271 2272 2273 2274 2275 2276 2277 2278 2279 2280 2281 2283 2284 2285 2286 2287 2286	Something and a Half w/s Solving Inequalities Calculator Brackets Adding One Matching Fractions w/s Right Angled Triangular Prisms Substituting into Formulae Multiplication Flags w/s Shape-Tiles w/s Find the Route w/s Spreadsheet Squares Plus and Minus Grids w/s Rational Numbers Irrational Numbers Irrational Numbers Irrational Pencils I've got the Power Lines, Regions and Inequalities Looping Chains abc w/s Algebra Problems Curvy Tiles in LOGO Brackets Mapping Jigsaw w/s Island Game Equal Angles Simultaneous Match Jumping BoxN (SENSE/NO) Quadrants and Squares (DIME) Add & Sub Squs & Quads (DIME) Algebra Tak-Tiles on a Grid (DIME)	AT2 AT2 AT2 AT2 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT2 AT2 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2	Fra Mix a Registration of the state of the s	7663584 1/23638P545487558673/237 345466	2353 2354 2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2370 2371 2372 2373 2374 2375 2376 2377 2378 2379 2380 2381 2382 2383 2384 2385 2386 2387 2386 2387 2388 2388	End of level Review Matching Algebraic Exps w/s Angle Fit w/s Approximate Solutions Rotational & Line Symmetry Review Right-angle or not? Decimal Routes w/s Conversion Pack 1 Decimal Playing Cards Higher Decimal Win Decimal Difference Sixteen Quadrilaterals Matching Decimals Decimal Sort Conversion Pack 2 Rounding to 10 Powers of Ten Flags w/s Queens (MOVE) Equivalent Fractions Pairs Polygons in Circles Maths in Your Head TenSprint(NUM) Matching Fractions (NUM) Ordering Fractions (NUM) Number Lines (NUM) Number Lines (NUM) Areas of Polygons w/s Solid Expressions Angles in a Regular Hexagon w/s Nine Nine Nine Multiplication Review Multiples of Ten w/s Six Pyramids Percentages Puzzles w/s	AT2/3/ AT2/3/ AT2/3/ AT2/3/ AT2 AT3 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT2 AT3 AT3 AT2 AT3 AT3 AT3 AT3 AT3 AT3 AT3 AT3 AT3 AT3	4444 Algrand Orland Orl	78P7455255 56544635 56 2554658546376
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2400	Circle Cut w/s	AT3	CiM	8
2401	Play Your Cards Right	AT2	PNo	3
2402	Equivalent Fractions Sort w/s	AT2	Fra	5
2403	Missing the Point	AT2	Dec	5.

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Network 1 – 5

April 2001

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The grids below are designed to aid the recording of student assessment over a period of time.

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	and	lue, Ordering rounding	•	Numbers and the Number System tegers, Powers and Roots Fractions, Decimals, Percentages, Ratio and Proportion rs Properties Directed					Number Op	erations			
Levels 1/2	Place Value/ Number Systems 19-Piece Jigsaev 1556 The Higher the Better 2195 Box (SENSE/NO) 1625 Hexagon Puzzie w/s 2305 Number Sort w/s 2110	Ordering and Rounding Guess (SENSENO) 1605	Powers and Roots	Properties of Number Odd and Even 0265 Even Animal w/s 1862 Odd Animal w/s 2147 Joining Odds and Evens w/s 1359 Evens w/s 0868 Joining Multiples w/s 1358	Directed Number	Fractions Halves and Quarters w/s 1355 Something and a Haif w/s 2252	Decimals		Percentages	Ratio	Pegboard Sums 1324 Tens 1417 Making Ten 0248 How Many Ways? 0249 Adding Numbers 0458 Adding Shapes 0459 Trangle Sums Game 2307 Birthday Dates 2003	Number Pictures 0457 Bowling Tom 0353 TenSprint (NUM) 2377 10 Search w/s 2212 5p a Line 2227 £1 Search w/s 2153 How Much? 1356 Making 25p 2205	Subtracting 0464 Differences Game 1520 Subtract 0467
Level 3	Filing Cards w/s 2131 Largest and Smallest 1663 Sevens Out 1874 (*) Number Square Words w/s 2193 Putting in Order w/s 2239 Egyptian Numbers 0334 Clock Anthmetic 0423	Calculator Guesses 1423 Rounding to 10 2371 Less Than More Than 0250		Pictures from Multiples w/s 1360 Rectangle Patterns 0233 More Rectangle Numbers 0297 Pattern Spotting (PROP/NO Pg16) 1920 Number Clues 1648 Lines 1367 Play Your Cards Right 2401 Squares (INVEST Pg4) 2094		Matching Fractions w/s 2256 Shading Fractions w/s 0259 Making One w/s 1959 Equal Fraction Pairs 2105	Using Decimals 2335 Decimals on a Number Line w/s 2332		Out of 100 w/s 2133	Twice as Many 2190	Carry on Adding 0460 100 Search w/s 1849 Number Noughls and Crosses 0885 Number Squares 4 w/s 0030 Multiples of Ten w/s 2387 Fifteen Game 1699 Three in Line 1361	Change 1687 Tom the Bowling Champ w/s 0354 Bowling Tom's Problem 0355 Calculator Problems 0085	Subtraction 0465 Carry on Subtracting 0904
Level 4	A Hundred 0376 Figures for Words 1461	Two Down 2172 BoxN (SENSE/NO) 2284 Matching Decimals 2368	Square Numbers 0298 Triangle Numbers 1 0220 Pegs in Squares 2047	Factors 0307 Triominoes 0474	Hot and Cold w/s 2045 Boxes w/s 1799	Hexagons w/s 0396 Fractions 4 w/s 0058 Fraction Families 2097 Equivalent Fractions 0333 Wall (SENSE/NO) 1730 Fractions 3 w/s 0057	Decimal Sort 2369 Decimal Lines 1426 Decimal Lists 1751 Decimal Search w/s 2338		Percentage Estimation w/s 2199 Percentages of Money w/s 2143 Equivalent Pairs (ENRICH) 2393	Pencils 1710 Walking to School 1649 Numbertines (NUM) 2380	Exactly Ten 1825 Multiples of Ten w/s 2387 Marked Buttons 1632 (2) Number Puzzle 1 0104 Rows and Columns 2245	Oxfam Collection w/s 2107	Darts (NUM) 1747 Sub-zero 1713
Level 5	Roman Numerals 1411 Bengali >> Piece Puzzle (box) 1858 Which Number? 1786 Bengali Numbers 1913 Magnify (SENSE/NO) 1835 Minimax (SENSE/NO) 1729	Sensible Answers 2392 GuessN (SENSE/NO) 2285 GuessD (SENSE/NO) 1606 Halving 1316 Higher Decimal Win 2365 Approximate Solutions 2359	Three Squared 0299 Square Pegs in Round Holes 0230 Finding Square Roots 1566 Squaring 0429	Prime Numbers 0308 Multiple Patterms 0330 (2) Sieve of Eratosienes 2246 Identify (PROP/NO) 1745 Visiting Every Point Circles 1727 (*) Triangle Numbers 2 0221 Black and Red Tnangle Patterns 2090 The Factor Game 1655 Common Factors 0310 Factor Finder 0311 Odds and Evens Tables 0240 Summing the 00338	Shakes and Adders 2179 Adding Shifts w/s 0550 Marbles 0549	Fraction Bings 2300 Finding Equivalent Fractions 2039 Matching Fractions (NUM) 2378 Fraction Wall w/s 0367 Equivalent Fraction Pairs 2374 Folding Fractions 2160 Ordering Fractions (NUM) 2379 Fraction Flags 1689 (2)	Measuring Windows 1300 Pounds and Pence w/s 1570 Mult & Div by 10, 100 & 1000 w/s 1317 (2) Tenners (NUM) 1834 Missing the Point 2403 Powers of Ten Flags w/s 2372 BoxD (SENSE/NO) 1728 Decimal Houtes w/s 2362 Decimal Jugsaw 1749	Decimal Products 1743 Decimal Patterns 1484 (2)	50% is Half Marks 1572 Make That Number (ENRICH) 2394 25% of What? 2236 Wage Bargarning 0792 Percentages w/s 1095	Under a Magnifying Glass 1752 Cooking Numbers 1294 (2) Introducing Ratio 2267 Comparing Ratios 2336 Conversion Pack 1 2363	Magic Circles 2217 (*) Addsupto (NUM) 1767 Odd Add 2053 Domino Sums 1591		

culations —————				- Algebra ———		
ntal, Written and Calculator Methods	Equations, F	Formulae and Identities		Sequence	es, Functions and Graphs	
Multiplication Division Mixed	Algebraic Structure	Equations	Sequences	Pattern/ Generalisation	Mapping Graphs	Using Gri
Authipication Bounce Incase 1430 1430 1671 1430 1671 1881 1881 1881 1881 1881 1881 1881	1	Number Squares w/s 0027 Number Squares 2 w/s 0028 Find the Number 1 w/s 0031	Jumping Jack w/s 0713	Columns 0115 100 Square Patterns w/s 0121 More 100 Square Patterns 0151	A Secret Code 0241	Journal of the second of the s
X Table w/s 2340 (2) 24 Squares Wildlife Again Wis Wis Collection Wis Wis Wis Collection Wis		Find the Number 3 w/s 0033	Counting On w/s 0316 Square Diagonals w/s 1945 (*) Matchstick Sequences 1312 Describing Sequences 2314 Square Spirals 0862 Spots in Sequences 0313	Nines w/s 0114 Number Words 1899 (*)	TV Drinks 0171 Cracking the Code w/s 0242 An Even Code w/s 1733 Mapping Jigsaw w/s 2278 Mapping Rectangles w/s 2296	
of level review: Number and Algebra 2350 (2) x Table w/s Short Division Carrying 0833 Calculating Pg 9) Calculating P	Venus Clock 0461 Multiplication Flags w/s 2259 Quadrants and Squares (OIME) 2286	Action Equations 1404 Jump Equations 1405 Find the Number 4 w/s 0034	Triangle Spirals 0861 Sequences of Numbers 0317 Hundred Fit (box) 2303 Sequences in Squares w/s 0346 Sequences Jigsaw w/s 2310 Table Squares w/s 0352 Cardioid w/s 0069	Doubling Patterns w/s 0292 Stacking 2128 (*) Tadpoles (MATH PUZ) 1756. Circles to Polygons (INVEST Pg10) 2086 Nine Nine Nine Nine 2385	Mapping Puzzle 1668 (2) Think of a Number 0386 Mapping Machines 0173 A Match for Anyone 0172	Old Oak 0889
of level review: Number and Algebra 2351 (2) a be continued Division 782 (2) 1946 lelosia 10758 long Multiples of 3 and 9 evision 1429 (2) 1780 lulliplication roblem? 1424 lore Calculator problems (1990) onsecutive Remainder (ENRICH) 2395 roductive 2395 roductive 2395 roductive 2395 of level review: Number and Algebra 2352 (2)	Short Orders 2209 Beat the Code 2334 abc w/s 2274	And Now Swahill 0691 Equality and Inequality 1406 Puzzles 1081	Patterns in Spirals 2320 Negative Sequences 2293 Nephroid w/s 0470 Dots in Sequences 0314 Patterns (Calculating Pg 12/13) 2119 Looping Chains 2273 (*) Calculating Kitty 1613 Squidge 0257 Squidgeree 0258 Building Shapes w/s 0383	Cuts to Preces 2241 Many Grids (PROPNO Pg25) 1936 (*) Mind Reversal 1659 Sections 1307 (*) Mystic Rose w/s 1555 (*) Frogs (MATH PUZ) 1651 (*) Chess 2221 (*) Reverse (MATH PUZ) 1603 Jigsaws 2221 (*) Reverse (MATH PUZ) 1603	The Inverse O781 Mapping W/s O476 Alf, Mike or Leena O181 Domino Patterns 2059 From Matches to Mappings W/s 2216 x for Breakfast O167 Flags (D/ME) 1339 (3)	Graphs 1115 Time/ Distance Graph 0073

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				etrical Reas	oning					Transfo	rmations		Coordin ates	Construction & Loci	
phs		3-D		Shape	Properties of Shape	Angle Properties	Topology	Similarity/ Enlargement	Rotation	Reflection	Translation/ Vectors	Combined Transformations	Co-ordinate:	Drawing	Me
		Eight Cubes 1522		Tak Tiles A (DIME) 0906 (2)	Sam Shape w/s 0493		Oxford Street w/s 2089			Folding Symmetry 0400	Border Patterns 0471	Patterns on a line w/s 2306		Growing Patterns w/s 1942	Usi Rul 02
		Looking Around w/s		Tak Tiles B (DIME) 0907 (2)	Word Match		2000			Two Folds 0406	Island Game 2279	Maze (MOVE) 1609		1012	Sna Tra 22
		w/s 0617 Four		Tak Tiles C (DIME)	w/s 2308 Interlocking					Symmetry Match w/s	Shape Tiles w/s	Patterns with Squares			Сег 17
		Four Cubes 1867		0908 (2) Cutting up Rectangles 0322	Squares (DIME) 1841					1868	^{w/s} 2261	0478 Pattern Pack A (DIME)			Tim 13
					Shapes Jigsaw (DIME) 1842					Reflect -a-bug 1680		1908 (4)			Tim 08
				Tile Patterns 0851	What Shapes? w/s 1856							Pattern Pack B (DIME) 1909 (4)			
					Sım w/s 1669										
		Fill the		Dissection 1	Triangle				Turning	Mirror			Co-ordinate	Envelopes 0071	Zigi 17
		Shapes (DIME) 1876 (2)		0050	Pairs 0859				Turning Patterns 0320	Symmetry w/s 0251			Messages w/s 1758		17 Hov 08
		Solids w/s 0404		Tak Tiles D (DIME) 0909 (2)	Diagonals 1384 Find Four				Rotations 0324				Co-ordinates 1 0261	Midpoint Sequences w/s 0456	With 23
		Solid Shapes 1322		Fitting 1700 Squares and	Squares w/s 1812				Angles: The Compass 0281					Spirals w/s 1557	Jur 22
		Two by Two 1765		Triangles 0035	Four Sides 2054				Compass Game 1949						Met Cer 03
					Find the Shape w/s 1828										Mat w/s 23
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		Triouthea	Prism or	Dissection 2	Two Cuts	Angles of s	How Many	Sadina	Rotation			nape, Space and Measurer	nents 2350 Co-ordinates 3	Concentric	
		Tricubes (DIME) 2073	Pyramid? w/s 1321	0051	Investigation w/s 1592	Angles of a Triangle 0159	Colours? w/s 0359	Sorting Triangles 1905	Symmetry Jigsaws 2111	Symmetrical Triangles w/s 1847	Vector Messages 0339	Locate the Error 0695	0263	Circles 0394	Acci Mea 001
		Back to Back 1872	Dice 1377	0052 Dissection 4	Rectangles in Circles 1422 (2)	Angle Fil w/s 2358	Colouring the Dots 1634 (*)			Symmetry w/s 1565	Vector Sea 0377	Board Order 1675 Tetromino	Rhino (COORD) 1621	Nets of a Cube 0295	Mea Peni 22
		Two Blocks (DIME) 1878 (3)	Isometric Drawing 0070	0053 (3) Tangram 1 0005	Triangles in Circles 1427 (2)		Economical Weaving w/s 1525					0048	Grids 0853 Changing Grids	Prisms and Pyramids 0008	How Long 02.
		A Red Cube 1523		Tangram Arrows w/s	2-Piece Square 0366		How Many Routes? w/s 0424						w/s 0384	Straight Lines w/s 1844	Time 062
		Half a Cuboid 2071		1299 (2) Spatial Reasoning	Getting into Shape (box)		0424						Cartoon Co-ordinates w/s 0264 (2)	Pentagons w/s 1629	Mate w/s 17!
		2071		Reasoning (DIME) 1896 (3)	1791								Co-ordinates 2 0262	Tetrahedron	Aboi Muci 174
				Equilateral Triangle 0040	Matchstick Puzzles 0131								Fishing w/s 1379	Nets 0349	Goo 131
															Ther Real 14(
		Add a Cube	Recognising	Dissection 5	Shape Names	Finding Angles	Networks 0075	Domino 0046	Rotations	Line Symmetry A	More Vector	pe, Space and Measurem	where's that Town?	Octahedron	Roo
		Add a Cube or Two (DIME) 1877 (3)	Recognising Solids (DIME) 1334 (4)	Tangram 3	Names w/s 2161	Finding Angles of a Triangle 0235		0046 Double Up 1388	w/s 0730 Centres of	1-4 (DIME) 1718	Messages w/s 1309 (2)	Moving Pictures 0432 (2)	0481	Octahedron Nets 0484	Roo Mov 13;
		Building with Tricubes (DIME) 2074	Origami Cube 2219	0007 Hexagon	Hidden Shapes w/s 0697	Angles of a Quadrilateral 0072	Airline Networks 1757 Routey	1300	Rotation w/s	Add-a-Square w/s 1717 Symmetry		Alphabet Symmetry w/s 2023	Ali Co-ordinales 0494	Ruler, Pencil and Compass 0732	
		4 Cube Solids 1524 (2)		O411 Tangrams (MA Poster) 0778	Visualising 2155	About Angles 0039	Routey 0495 Nodes w/s 0341		Wheels 1352	Symmetry Codes w/s 2035 Reflection 0709		Rotational and Line Symmetry Review 2360	Lines (COORD) 1641	Equilateral Construction 1287	
		Tricuhe		7 Piece	Sixteen Quadrilaterals 2367 (*)	Regular Hexagon w/s 2384	Inside or Outside?			Adding Counters w/s				Perpendicular Bisectors 0211	
		Plans (DIME) 2075		Tangram 0105 (2)	Hexiamonds 2231	Angles of a Polygon 0267	0452			1914 Mirror Match (DIME)				Bisecting an Angle 0212 (2)	
				Regular Tilings 1 (DIME) 1889 (4)	Identikii 1698	Exterior Angles of Polygons 0268				1866 (3) Line Symmetry B 1-3 (DIME)				Islamic Designs 2063	
				Tangram Teasers 0348	Midpoints 0455 (*)	Equal Angles				1892 (2)					
				Squares Tangram 0721		1331 (2) Fold it 0809				Line Symmetry 1954 Rangoli Patterns 2309					
						Missing Angles w/s 2330						_			
]						2000				End of leve	el review: Sha	pe, Space and Measureme	ents 2352 (2)		

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		Measurer	ments and	Mensurati	on					Planning & ollecting Dat	Pro a Repre Interp	cessing, esenting & reting Data		bability	
:remen	Area/ t Perimeter		Circle Measuremer	Surface Area/ It Volume	Angle .	Trigonometry		Logic and Sets		Collecting Data	Displaying Data	Analysing & Interpreting Data	Probability		_[
	Which has the Largest Area? w/s 2230			How Many Cubes? 1722	Right-angle or not? 2361			Tuming Green w/s 2158			Favourite Colours w/s 0448	It's Raining 0857	Colouring Triangles 0852		
	How Many Centimetre Squares? w/s				•			Mare Sorting 0244							1/2
TeS .	1919 What is the Perimeter?							Which Card is Missing?							
•	2238							Jobs in Order 1376							<u>S</u>
(2)															9
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•3 57	Area 1 0022 Area 3				Equal Angles 2280			Find the Uncle w/s 1703		Vehicle Survey w/s 0272 (2)	People in Villages 0864	Handspan 2210 (*) Favourite Ice	Likely or Unlikely? 2034	Turning the Cards 2313	
_er	0024 Eight Squares				Right-Angles 0286			One Difference Logichains 0428				Cream 2304			
đ	1628 Rectangles							Two Loops 0579							က
€ Weights	w/s 0178 Perimeter							Venn Diagrams 0245							
7	0854							Surfaces w/s 0390							/e
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r	Area 2 0023 Twelve Inch		It's not Fair! 2146	Layers 1750	Angle 90° (ANGLE) 1721			1848 (*)	Which Set? 0291			Hot and Cold (Calculating Pg 15) 2121	Logical Kitty 1690 Shading strips	Experiments 0290 Rolling two	
ç	Perimeter 1413			Block Problems 1436	Measuring Angles 0775			All Change 0475 Counter Puzzle 0123	Three in a Line			The Mode w/s 2174	Shading strips 1845 (*)	Rolling two dice w/s 0288 Strange Dice Game	4
•	The Same Area 0860				Drawing Angles 0776			O123 Out of Line 0133	3 in 1 Maze (poster) 2037			The Median 2329		2189 Pizza or	
s Pairs	Which is Larger? 0185				Logo is Amazing 2268			0133 Hopslide (MATH PUZ) 1755	An Honourable Problem 1304			The Mean 1409		pasta? 2319 Lucky Dip	Ve
•	Silver Earrings w/s 1824							1755 Self-Portrait w/s 1627						1643 Fair Play 2017	(e)
sswork	Area 4 0025							Find the Stranger 0870						How Likely? 2152	
e:er (2)								Three Loops 0585							
							L	√		nd of level revi	ew: Handling	Data 2351 (2)			ī
(*)	Pentomino Puzzles 1927 (2)		Circumference 0392 (2)	Volumes 2178	Amazing Logo 2269			Boal (MATH PUZ) 1626 (*)		Big Hand Big Foot? 2181	Feeling Hungry? 1792	Testing Dice 2198	Which Switches? 0694	What's the Probability? 1132	
	Area and Perimeter 0119		Making Circles 2142	Right Angled Triangular Prisms 2257	Snooker (ANGLE) 1624			Logical Kitty 1615		Sampling Shoes 1292	Information Displayed 2164	Statistics 3 Review 0897 (2)		What Can I Wear? 0453	
	Right Angled Triangles w/s 0168		All About Circles 2083	Centicube Surprise 1720	Satellite Signals w/s 0777			Who's Who? 0727		ls it true? 2033 (*)	Pie Chart Match w/s 2171	Population Projections 2177		Four Beads (DIME) 2011 (2)	5
	Areas of Polygons w/s 2382				Angle 360° (ANGLE) 1787			Logic Maps 0677 Who is the			Pie Charts for Breakfast 2200	Code Breaking 0808			a
	Make Haif 1741 (2)				Angle Estimation 0772			Who is the Schoolkeeper? 1897 What's the Difference? w/s							
	Half a Rectangle 0169				Free Hand Angles 0788			2088							e V
	Area of a Triangle 0166				Radar w/s 0510			A Hungry Death? 0674 Hats (MATH PUZ) 2327							
					Bearings 2302			2327							
									_	المستعددة المساهمات	11c 10*	Dete none (c)			1
				-	-				En	d of level revie	w. mandling	vata 2352 (2)			

Using and applying mathematics

The assessment criteria below are to be used to assess Using and applying mathematics in the context of Number and algebra and Shape, space and measures. Separate assessment criteria must be used for assessing Handling data at Key Stage 4.

Level	Making and monitoring decisions to solve problems	Communicating mathematically	Developing skills of mathematical reasoning	Mark
1	Candidates use mathematics as an integral part of classroom activities.	Candidates represent their work with object or pictures and discuss their work.	Candidates recognise and use a simple pattern or relation ship, usually based on their experience.	
2	Candidates select the mathematics for some classroom activities.	Candidates discuss their work using familiar mathematical language and are beginning to represent it using symbols and simple diagrams.	Candidates ask and respond appropriately to questions including "What would happen if?"	
3	Candidates try different approaches and find ways of overcoming difficulties that arise when they are solving problems. They are beginning to organise work and check results.	Candidates discuss their mathematical work and are beginning to explain their thinking. They use and interpret mathematical symbols and diagrams.	Candidates show that they understand a general statement by finding particular examples that match it.	
4	Candidates are developing their own strategies for solving problems and are using these strategies both in working within mathematics and in applying mathematics to practical contexts.	Candidates present information and results in a clear and organised way, explaining reasons for their presentation.	Candidates search for a pattern by trying out ideas of their own.	
5	In order to carry through tasks and solve mathematical problems, candidates identify and obtain necessary information; they check their results, considering whether these are sensible	Candidates show understanding of situations by describing them mathematically using symbols, words and diagrams.	Candidates make general statements of their own based on evidence they have produced and give an explanation of their reasoning.	
6	Candidates carry through substantial tasks and solve quite complex problems by breaking then down into smaller, more manageable tasks.	Candidates interpret, discuss and synthesise information presented in a variety of mathematical forms. Their writing explains and informs their use of diagrams.	Candidates are beginning to give a mathematical justification for their generalisations; they test them by checking particular cases.	, ,
7	Starting from problems or contexts that have been presented to them, candidates introduce questions of their own, which generate fuller solutions.	Candidates examine critically and justify their choice of mathematical presentation, considering alternative approaches and explaining improvements they have made.	Candidates justify their generalisations of solutions, showing some insight into the mathematical structure of the situations being investigated. They appreciate the difference between mathematical explanation and experimental evidence.	
8	Candidates develop and follow alternative approaches. They reflect on their own lines of enquiry when exploring mathematical tasks; in doing so they introduce and use a range of mathematical techniques.	Candidates convey mathematical meaning through consistent use of symbols.	Candidates examine generalisations or solutions reached in an activity, commenting constructively on the reasoning and logic employed, and make further progress in the activity as a result.	:
tional	Candidates analyse alternative approaches to problems involving a number of features or variables. They give detailed reasons for following or rejecting particular lines of enquiry.	Candidates use mathematical language and symbols accurately in presenting a convincing reasoned argument.	Candidates' report includes mathematical justifications, explaining their solutions to problems involving a number of features or variables.	
Exceptional Performance	Candidates consider and evaluate a number of approaches to a substantial task. They explore extensively a context or area of mathematics with which they are unfamiliar. They apply independently a range of appropriate mathematical techniques.	Candidates use mathematical language and symbols accurately in presenting a concise reasoned argument.	Candidates provide a mathematically rigorous justification or proof of their solution to a complex problem, considering the conditions under which it remains valid.	

The SMILE 2001 Network

The 2001 SMILE Network reflects the Mathematics National Curriculum 2000 and the KS3 Framework for Teaching Mathematics 2001. The Network is intended to assist teachers in planning and recording a scheme of work for each student according to their mathematical needs.

The Network can be used as a formative record of the student's progress throughout Key Stages 3 and 4 and as an aid to summative teacher assessment at the end of Key Stage 3 because the SMILE activities are arranged to reflect the sections of the Programme of Study.

A student's Network provides evidence of the extent to which the Programme of Study has been covered. The final decision about which Level Description best fits the student should be made in the light of work satisfactorily completed and understood and the teacher's knowledge of the student's mathematical ability.

The Inside of the SMILE Network - The programmes of study for mathematics

The SMILE Network contains a variety of different codes which are intended to provide help for teachers when setting work for a student. These are explained below.

World View 1886

Activities which require thought and planning before being set for students

Algebra

A SMILE activity which is a worksheet - found in the SMILE Worksheet Pack.

Match w/s 2203

Written in lower case letters.

Target 200 (Calculating Pg 16)

A SMILE activity which can be found in SMILE 1783 Calculating Booklet, page 16

Written in lower case letters in brackets.

2114

A SMILE activity which is not usually stored with the workcards or worksheets.

Hundred Fit (box) 2303

Written in lower case letters in brackets, e.g. (poster).

Solve it 0740 (2)

A SMILE activity. The number inside a bracket indicates a longer activity. The

number gives a guide to the approximate expected length of the activity.

Up the Stairs 2185 (*)

A SMILE activity. Either investigative or practical where the work can only be

assessed after the activity has been completed.

Comparing Areas (DIME) 2291 Activities from other publishers and SMILE software are identified by the source written in **upper case letters** in brackets. Full details of all these are found on the

SMILE Commercial References Sheet, available from SMILE Mathematics.

The Outside of the SMILE Network

Assessment Grids

To aid the recording of:

- NFER results
- termly assessment and attainment grades
- individual action targets
- SEN and IEP's

Using and applying mathematics criteria reflect the three stands for Key Stage 4.

Other Resources

SMILE resources which are:

- Teacher Resources
- Support materials for students
- Additional resources



Inital Teacher Assessment

Network 4 - 7

April 2001

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The grids below are designed to aid the recording of student assessment over a period of time.

	o esta de la constante de la c			Key Stage 2
Key Stag	ge 3 Asse	ssment	 	
Year /				
rear o				Key Stage 3
				TA SAT's
M-7	e 4 Asses	sment	 ,	
				Target
Year 10				Grade
				Predicted
Year 11				Grade

		ue, Ordering ounding		Numbers s, Powers a			-	m ———— mals, Perce Proportior		io and		Number C	Dperations,
	Place Value/ Number Systems	Ordering and Rounding	and Hoots	Properties of Number	Directed Number	Fractions	Decimals		Percentages	Ratio	Addition		Subtraction
	A Hundred 0376 Figures for Words	Two Down 2172 Boxn (SENSE/NO)	Square Numbers 0298	Factors 0307 Triominoes 0474	Hot and Cold w/s 2045	Hexagons w/s 10396	Decimal Sort 2369		Percentage Estimation w/s 2199	Pencils 1710 Walking to School 1649	Exactly Ten 1825 Multiples of	Oxfam Collection w/s 2107	Darts (NUM) 1747 Sub-zero
4	1461	2284 Matching Decimals 2368	Triangle Numbers 1 0220 Pegs in Squares 2047	0474	1799	W/s 0058 Fraction Families	Lines 1426 Decimal Lists		Percentages of Money w/s 2143	1649 NumberLines (NUM) 2380	Ten w/s 2387 Marked Buffons		Sub-zero 1713
a			204/			2097 Equivalent Fractions 0333	1751 Decimal Search w/s 2338		Equivalent Pairs (ENRICH) 2393	2000	1632 (2) Number Puzzle 1 0104		
) Ve						Wall (SENSE/NO) 1730					Rows and Columns 2245		
L						Fractions 3 w/s 0057							
	Roman Numerals 1411	Sensible Answers 2392	Three Squared 0299	Prime Numbers 0308 Multiple Patterns	Shakes and Adders 2179	Fraction Bingo 2300	Measuring Windows 1300	<u> </u>	50% is Hall Marks 1572	Under a Magnifying Glass 1752	Magic Circles 2217 (*)		'
	Bengali >> Piece Puzzle (box) 1858	GuessN (SENSE/NO) 2285	Square Pegs in Round Holes 0230	Multiple Patterns 0330 (2) Sieve of Eratostenes 2246	Adding Shifts w/s 0550	Finding Equivalent Fractions 2039	Pounds and Pence w/s 1570	Decimal Products 1743	Make That Number (ENRICH) 2394	Cooking Numbers 1294 (2)	Addsuplo (NUM) 1767		
D	Which Number? 1786	GuessD (SENSE/NO) 1606 Haiving 1316	Finding Square Roots 1566	Identify (PROP/NO) 1745 Visiting Every Point (INVEST Pg8) 2202	Marbles 0549	Matching Fractions (NUM) 2378	Mult & Div by 10, 100 & 1000 w/s 1317 (2)	Decimal Patterns 1484 (2)	25% of What? 2236	Introducing Ratio 2267	Odd Add 2053 Domino		
T	Bengali Numbers 1913	Higher Decimal Win 2365	Squaring 0429	Point Circles 1727 (*)		Fraction Wall w/s 0367	Tenners (NUM) 1834 Missing the Point 2403		Wage Bargaining 0792	Comparing Ratios 2336	Sums 1591		
Š	Magnify (SENSE/NO) 1835 Minimax	Approximate Solutions 2359		Triangle Numbers 2 0221 Black and Red Triangle Patterns 2090		Equivalent Fraction Pairs 2374	Powers of Ten Flags w/s 2372		Percentages w/s 1095	Conversion Pack 1 2363			
—	(\$ENSE/NO) 1729			The Factor Game 1655 Common Factors 0310		Folding Fractions 2160	BoxD (SENSE/NO) 1728						
				Factor Finder 0311 Odds and Evens Tables 0240		Ordering Fractions (NUM) 2379	Decimal Roules w/s 2362						
	L			Summing the Odds 0338		Fraction Flags 1689 (2)	Decimal Jigsaw 1749			_			1
	Urdu Multiples 1875 Chinese	Problems (Calculating Pg 22/23) 2126	Power 0388 (2)	Tum the Tables 1394 (2)	Adding Directed Numbers 0516	Fraction Squares 2156	Fractions to Decimals Match w/s 2223		54% is a little more than Half Marks 2004	Ratio Problems 1709 (2)			
10	Number Puzzie (box) 1754	Decimal Place Match w/s 2398	Match w/s 2019 The Root of the Problem	Factor (PROP/NO) 1708 Define (PROP/NO)	Positive or Negative? 0884	Tower (SENSE/NO) 1666 Who Won?	Decimal Difference 2366		Percentage Puzzle w//s 2389	Conversion Pack 2 2370 Similar			
3	Which Scripts? (poster) 1931		2151 Squares, Cubes and Roots w/s	1746 Multiplication Table Patterns 1395 (2)		Adding One 2255	Targel 100 1631 Digit Division 1724		Marks to Percentages w/s 1096	Rectangles? 2134 Number Lines D (NUM)			
Ve			2095 Cube Root Calculator 2168	Prime Factors 0331		Route Six 1737	Decimal Flags w/s 2242		Fractions to Percentages 1097	2381 Car Trial Results 1696			
Þ			2.00	Number Names 1618		Adding Fractions 0402				1000			
						Fraction Sort 0683 Fraction							
						Waii 2 1528		_					ı
'	Hindi Additions 1881	Significant Figures 1202	Square Roots Investigation 1589	Diagonal Multiples (PROP/NO Pg26) 1950	Subtracting Directed Numbers 0517	Early Egyptian Fractions 1771 (3)	Gelosia for Decimals 1800		Excess Luggage 2024	Shrinking Earth 2065			
	Panjabi Numbers 1937		Powerful Rules 0592 (3) High	Consecutives 1319 (*) The Smith	Harder Negative Sequences 2297	Unit Fraction Patterns 2043	Quarto 1639 Decimal Calculations		Percentage Sales 1208	A Mountain Walk 2006 Unibond			
/			Powered Matching w/s 2020	Family Circus 1658 (2) The 'Times' Crossword	Multiplying Directed Numbers 1278		0153			Mixtures 1716 (2) Jeans 2067			
e			Powers of Ten w/s 0614	0748 (2) Number Challenge 2312 (*)	Dividing Directed Numbers 1279					A Millionaire 0791			
eve.			x ^V Experiment 2040	2312 (*) HCF & LCM 1673						The Champion Flea 1660			
Ĭ										International Paper Sizes 1315 (2)			

-Numbers and the Number System-

:ulations					- Algebra			
ntal, Written and Cald	culator Methods	Equations, Formu			Sequence	s, Function	ns and Graphs	
lultiplication Division	Mixed	Algebraic Structure	Equations	Sequences	Pattern/ Generalisation	Mapping	Graphs	Using Gra
x Table w/s 2344 (2) Division Carrying 0833 x Table w/s 2345 (2) Patterns with 11 and 13 0164 2 x Table w/s 2349 (2) lapier's lods 1066 tultiplying 1528	Sum product & difference 2294 2 Puzzles (Calculating Pg 9) 2116 Missing Signs 1357 Missing Keys 1462 Along the Line 1630 Junior Contig 0496 Ticket Sales (Calculating Pg 11) 2118	Venus Clock Q461 Multiplication Flags w/s 2259 Quadrants and Squares (DIME) 2286	Action Equations 1404 Jump Equations 1405 Find the Number 4 w/s 0034	Triangle Spirals 0861 Sequences of Numbers 0317 Hundred Fit (box) 2303 Sequences in Squares w/s 0346 Sequences Jigsaw w/s 2310 Table Squares w/s 0352 Cardioid w/s 0069	Doubling Patterns w's 292 Stacking 2128 (*) Tadpoles (MATH PUZ) 1756 Circles to Polygons (INVEST Pg10) 2086 Nine Nine Nine 2385	Mapping Puzzle 1668 (2) Think of a Number 0386 Mapping Machines 0173 A Match for Anyone 0172		Old Oak 0889
of level review: Number	(Do it first)	Short Orders	And Now Sushiii	Patterns in	Cuts to	The Inverse		Graphs
islosia 1946 islosia 1946 islosia 0758 ong fultiplication levision 1940 tultiplication roblem? 1429 (2) tore Calculator roblems 1990 islosecutive roducts (ENRICH) 2395 of level review: Number isloses product problems w/s 761 losest Product 725 in Game 742 in Game 1946 invision 1946 invision 1946 invision by duessing the guessing 1424 Decimal Estimation 1306 Decimal Estimation 1306 Decimal Estimation 1306 Dividing by Guessing 1424 Paramainder (ENRICH) 2395 invision 1940 invision 1940 (*)	0518 (2) 4+3 x 2 0398 Date of Birth (Calculating Pg 18/19) Pg 18/19) Pg 18/19) Nepali Numbers 2072 Harder Calculator Problems 0092 Get to One 1662 Target 200 (Calculating Pg 16) 2122 A Million 0365 J and Algebra 2352 (2) Calculator Brackets Wish 1463 Sum Dice 2154 One Million	Add and Subtract Squares and Guadrants (DIME) 2287 (2) Anywhere on the Number Line w/s 0849	Random Code O689 Number Puzzle W/s 0184 More Than, Less Than Less Than L2247	Spirals 2320 Negative Sequences 2293 Nephroid w/s 0470 Dots in Sequences 0314 Patterns (Calculating Pg 12/13) 2119 Looping Chains 2273 (*) Calculating Kitty 1613 Squidge 0257 Squidgeree 0258 Building Shapes w/s 0383 Staircases 0315 Match Patterns 1313 Triangle Patterns 1432 Trick or Treat	Cuts to Preces 2241 Many Grids (PROPNO Pg25) 1936 (*) 2125 (*) 21	Inverse 0781 Mapping w/s 0476 Alf, Mike or Leena 0181 Domino Patterns 2059 From Malches to Mappings w/s 2216 x for Breakfast 0167 Flags (DIME) 1339 (3) Number Machines (DIME) 1341 (3) x for Tea 0187	Mappings to Graphs O182 Graphs to Mappings O183 Drawing the Line O215	Raphs 1115 Time/ Distance Graph 0073 No Brakes Bruce 0362
The Lost Divide 1656 alcumaze 738 Repeating Digits 0752 quares 263 Quickly to Zero 0760 ISBN's and Errors 1454 (2)	(TARQUIN Poster) 1961 Missing Digit (Calculating Pg 8) 2115 Missing Digits (2115) Missing Digits (Calculating Pg 8) 2115 Missing Digits w/s 1711 Magic (NUM) 1833 Missing Signs (Calculating Pg 17) 2123	Re-Grouping 0830 Words won't fail me w/s 2237 The Algebra Game 2321 Algebra Tak-tries on a Ghd (DIME) 2288 (4)	Number Codex 0696 Solve it 0740 (2)	O450 (*) Card Towers 2070	Quilts (INVEST) 1798 Rose (INVEST) 1731 142857 Times Table 0784 Bounce (DIEE) 1620 (*)	1343 (2) Mappings 1378	y=mx (GRAPH) 1826 Parallel Lines 0430	
	Put them in their Place W/s 2251 Four Signs W/s 1712 Some Sums for Your Mind W/s 2157 Calculator Trial and Error 0155 2, 3, 4, 5 0162 Convince Yourself 2061	Who's Rule Okay? 2243 The Algebra Game 2 2322 Algebra Match w/s 2203 A New Unit of Area (DIME) Cliffer a Comparing Algebra Identities 0876 Differences Between Squares 0818 The Unknown Square 0818 Guide Comparing Algebraic Expressions w/s 2357 Differences Between Cliffer a Comparing Areas (DIME) Comparing Areas (Solving Equations 0736 Pattern and Notation (DiME) 1340 (3) Solving Simultaneous Equations for Length 0982 Centigrade and Farenheit 0757 (2) Solving Equations 1136 (2) Solving Equations 1136 (2) Solving Equations 1238 What could x be? 2136	Jugs (MATH PUZ) 1652 Fibonacci Type Sequences 2078 Ans and Exe 2042	The Chinese Triangle 1790 Cubes from Trangles 0783 (*) Pattems in Pascar's Triangle 1438 (2) Shongo Networks 2182 (*) Investigating Queens (MOVE Pg32) 1785 (*) Predict (PROP/NO) 1691 Counter Hopping Puzzle 0344 Rectangle Diagonal 0439	Algebra Puzzle 1412 Inverse Mappings 0837 Inverses 0745 Further Mappings (DiME) 1344 (2) Quadratic Mappings (DIME) 1855 (3)	Drawing the Curve 2018 2018 Mappings and Graphs (DIME) 1342 (4), and Graphs 0744 Solving by Graphs 0743 (2) Straight Line Graphs 0817 (2) Simultaneous Equations from Graphs 2301 Parallels (GRAPH) 1820 Calculator Graphs 2191 Lines, Regions and Inequalities 2272 Simultaneous Match 2281	Helicopter Photographs 1818 (2 Overtaking 1821 Time Distance Graphs 1127

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			Geome	etrical Reas	Ū			H as		-	rmations			Construc tion & Loci	,
hs		3-D		Shape	Properties of Shape	Angle Properties	Topology	Similarity/ Enlargement	Rotation	Reflection	Translation/ Vectors	Combined Transformations	Co-ordinates	Drawing	Mea
		Tricubes (DIME) 2073	Prism or Pyramid? w/s 1321	Dissection 2 0051	Two Cuts Investigation w/s 1592	Angles of a Triangle 0159	How Many Colours? w/s 0359	Sorting Triangles 1905	Rotation Symmetry Jigsaws 2111	Symmetrical Triangles w/s 1847	Vector Messages 0339	Locate the Error 0695	Co-ordinates 3 0263	Concentric Circles 0394	Accu Mea 00(
		Back to Back 1872	Dice 1377	Dissection 3 0052	Rectangles in Circles 1422 (2)	Angle Fit w/s 2358	Colouring the Dots 1634 (*)		2111	Symmetry w/s 1565	Vector Sea 0377	Board Order 1675	Rhino (COORD) 1621	Nets of a Cube 0295	Mea Pend 227
		Two Blocks (DIME)	isometric Drawing 0070	Dissection 4 0053 (3)	Triangles in Circles		Economical					Tetromino 0048	Grids 0853	Prisms and Pyramids 0008	How Long 02
		1878 (3)		Tangram 1 0005	1427 (2)		Weaving w/s 1525						Changing Grids w/s 0384	0008 Straight Lines w/s	Time 062
		A Red Cube 1523		Tangram Arrows w/s 1299 (2)	Square 0366		How Many Routes? w/s 0424						Cartoon Co-ordinates w/s 0264 (2)	1844 Pentagons	Matc w/s 175
		Half a Cuboid 2071		Spatial Reasoning (DIME) 1896 (3)	Getting into Shape (box) 1791								Co-ordinates 2 0262	1629	Abol Muci 174
				Equilateral Triangle 0040	Matchstick Puzzles 0131								Fishing w/s 1379	Tetrahedron Nets 0349	Good 138
				0040											Ther Reac 14(
				_		_				_ End of lev	el review: Sha	ape, Space and Measurem	ents 2351 (3)		_
		Add a Cube or Two (DIME) 1877 (3)	Recognising Solids (DIME) 1334 (4)	Dissection 5 0054	Shape Names w/s 2161	Finding Angles of a Thangle 0235	Networks 0075	Domino 0046	Rotations w/s 0730	Line Symmetry A 1-4 (DIME) 1718	More Vector Messages w/s 1309 (2)	Moving Pictures 0432 (2)	Where's that Town? 0481	Octahedron Nets 0484	Roo Mov 13:
		Building with Tncubes	Origami Cube 2219	Tangram 3 0007 Hexagon	Hidden Shapes W/S	Angles of a Quadrilateral 0072	Airline Networks 1757	Double Up 1388	Centres of Rotation w/s 0327	Add-a-Square w/s	. ,	Alphabet Symmetry w/s 2023	All Co-ordinates 0494	Ruler, Pencil and Compass 0732	
		Tricubes (DIME) 2074 4 Cube		Hexagon Dissection 0411	0697 Visualising 2155	About Angles 0039	Routey 0495		Wheels 1352	Symmetry Codes w/s 2035		Rotational and Line Symmetry Review	Lines (COORD) 1641	Equilateral Construction 1287	
		Solids 1524 (2) Tricube		Tangrams (MA Poster) 0778	Sixteen Quadrilaterals 2367 (*)	Angles in a Regular Hexagon w/s 2384	Nodes w/s 0341 Inside or Outside?			Reflection 0709 Adding Counters		2360		Perpendicular Bisectors 0211	
		Plans (DIME) 2075		7 Piece Tangram 0105 (2)	Hexiamonds 2231	Angles of a Polygon 0267	Outside? 0452			w/s 1914 Mirror Match				Bisecting an Angle 0212 (2)	
				Regular Tilings 1 (DIME) 1889 (4)	Identikit 1698	Exterior Angles of Polygons 0268				(DIME) 1866 (3) Line Symmetry B				Islamic Designs 2063	
				Tangram Teasers 0348	Midpoints 0455 (*)	O268 Equal Angles				1-3 (DIME) 1892 (2)				2063	
				Squares Tangram 0721		1331 (2)				Line Symmetry 1954					
						Fold it 0809 Missing Angles w/s 2330				Rangoli Patterns 2309					
												ape, Space and Measureme			
		Wedges 1 (DIME) 1882 (3)	Piaited Cube w/s 0098 Tetra-flexagon	Tessellations of Quadrilaterals 0326 (2)	is it Rigid? 0340 Tangled Quadrijalerals	Finding Exterior Angles 0269	3-D Frameworks 1947	Shapes that can grow w/s 1759	Rotational Symmetry 1955	Using a Mirror (DIME) 0581 (3)	Translation 1123 (2) Vector	Tuming and Topping (DIME) 1336 (5)	Locate (COORD) 1715	Cuboid Nets 0719 Start with 60°	How 085
		More Than Two Blocks (DIME) 1880 (3)	0145 (2)	Regular Tilings 2 (DIME) 1890	1764 Shape Up 2170	Versa-Tiles 1419 (2)	Traversable? 0426	Scale Factor 0838 (2)	Rotation 1112 (2)	Reflect w/s 0577	Vector Match 2228 Race Track w/s 0725		3 in a line (COORD) 1836	2311 The	
		Soma Solids 1672 (2)	Square (DIME) 2076	One Straight Cut w/s 1760	Four Triangles 1772	Angles from Tessellations 0284	Ealing Broadway 1958 (★)		Rotate This Way w/s 0839	Tricube Symmetries 2139	All out of line		Elephant (COORD) 1607	Circumcircle 0213 (2)	
		Tricube Codes 2127	Sketching Solids (DIME) 1335 (4)	Regular Tilings 3 (DIME) 1891 (4)	Two Triangles 1773	Angles and Triangles 2162				Symmetrical Cross Cut 0560	Tngg 1398			Circle 0232	
		3-D Maze (MOVE) 1732		Tessellating Pattems (TARQUIN	Using a Triangle 0364	Unmarked Angles w/s 2173				Points and their Images 0255	Queens (MOVE Pg33) 1714			Compass Constructions 1170 (2)	
		Building Cubes 1794		Poster) 2012	Yes/No 1744	Angle 4 Review 0877 (3)				Line Symmetry A 5–10 (DIME) 1719 (3)				Polygons in Circles w/s 2375	
					Paper Folding 1382 (5)	Acute/Obtuse 0433				1710 (3)				Curvy Tiles in Logo 2276 (2)	
		Making a 3 x 3 x 3 Cube (DIME) 2077			Ask Me Another w/s 2240	Polygons; interior Angles 0800 (2)									
										End_of_leve	el review: Sha	pe, Space and Measureme	ents 2353 (3)	_	
		Blue in the Face 2197 (*)	Origami Dodecahedron 2218	Dissection Pairs w/s 1911	Polygon Symmetries 1873 (*)	Angles in a Semi-circle 1935	About Nodes 0342	Four Pentominoes 1928 (2)		Line Symmetry B 4–6 (DIME) 1893 (2)	Translations 1934	Combining Transformations 1561 (2)		Nets of Pyramids 0720	Less are B 059
		Build and Balance (DIME) 1879 (3)		Weaving w/s 1647		Cyclic Quadrilateral 0165	The inseparables 0492 (*)	Areas of Similar Shapes 1559 (2)		Line Symmetry B 7-10 (DIME)	Race Game (MOVE) 1654	Shape Sequences 2214 (*)		Spiralling Squares Patterns 2031	
		Euler Solids (MA Poster)						.,		1894 (2) Reflections (DIME)	Journeys 1329	Cube Cuts 0675 (★)		Constructive Designs 2141 (3)	
		1354 (3)								1337 (5)	Vectors and Squares 2201	Cross Stitch 2145 (*)		Tie w/s 2058 (2)	
		Corners 2132 Cut a									Avoiding Each Other (MOVE Pg30) 1777			Ellipses by Folding 2055	
		Cut a Cube 223 2									,,			Painled Tyres 1912 (*)	
														I ∃ I∠ (★)	

End of level review: Shape, Space and Measurements 2354 (2)

_) r	_		— Hand	dling Da	ita ——			<u> </u>
		Measure	ments and I	Mensuratio	on				Co	Planning & Illecting Data	a Repre	essing, senting & eting Data	Prob	ability	
emen	Area/ Perimeter		Circle Measurement	Surface Area/ Volume	Angle	Trigonometry		Logic and Sets		Collecting Data	Displaying Data	Analysing & Interpreting Data	Probability		
	Area 2 0023 Twelve Inch Perimeter 1413 The Same Area 0860 Which is Larger? 0185		It's not Fairl 2146	Layers 1750 Block Problems 1436	Angle 90° (ANGLE) 1721 Measuring Angles 07,75 Drawing Angles 0776 Logo is Amazing			Three by Three 1848 (*) 4 All Change 0475 Counter Puzzle 0123 Out of Line 0133	Which Set? 0291 Three in a Line 1301 3 in 1 Maze (poster) 2037			Hot and Cold (Calculating Pg 15) 2121 The Mode w/s 2174 The Median 2329 The Mean 1409	Logical Kitty 1690 Shading strips 1845 (*)	Expenments 0290 Rolling two dice w/s 0288 Strange Dice Game 2189 Pizza or pasta? 2319	<u> </u>
sswork	Silver Earrings w/s 1824 Area 4 0025				2268			Hopside (NATH PUZ) 1755 Sell-Portrait w/s 1627 Find the Stranger 0870 Three Loops 0585		nd of level revie	•w• Handlino	Data 2351 (2)		Lucky Dip 1643 Fair Play 2017 How Likely? 2152	Leve
)	Pentomino Puzzles 1927 (2) Area and Perimeter 0119 Right Angled Triangles w/s 0168 Areas of Polygons w/s 2382 Make Half 1741 (2) Half a Rectangle 0169 Area of a Triangle 0166		Circumference 0392 (2) Making Circles 2142 All About Circles 2083	Volumes 2178 Right Angled Triangular Prisms 2257 Centicube Surprise 1720	Amazing Logo 2269 Snooker (ANGLE) 1624 Satellite Signals w/s 0777 Angle 360° (ANGLE) 1787 Angle 360° (ANGLE) 1787 Angle 360° (ANGLE) 1787 Bearings 2302			Boat (MATH PUZ) 1626 () Logical Kitty 1615 Who's Who? 0727 Logic Maps 0677 Who is the Schoolkeeper? 1897 What's the Difference? w/s 2088 A Hungry Death? 0674 Hats (MATH PUZ) 2327		Brg Hand Brg Fool? 2181 Sampling Shoes 1292 Is it true? 2033 (*)	Feeling Hungry? 1792 Information Displayed 2164 Pie Chart Match w/s 2171 Pie Charts for Breakfast 2200	Testing Dice 2198 Statistics 3 Review 0897 (2) Population Projections 2177 Code Breaking 0808	Which Switches? 0694	What's the Probability? 1132 What Can I Wear? 0453 Four Beads (DIME) 2011 (2)	Level 5
	World View 1886 Chocolate Areas 0120 Rectangle Areas 1320 Area of a Parallelogram 0224 From Parallelogram to Rectangle 0228 Equal Area? Wis 2222 Triangle Problems 0236 (2) Shearing Parallelograms 0226	Parallelogram Problems 0227 Shearing a Triangle 0177	Round the Bend 2013 Circle Coverage 2149 Kit Bag 2060	Volume of Cubes 0142 Cuboids from Matchboxes 0381 Volumes 2 0143	Bearings and Scale Drawings 1434 (2) Pilot (MOVE) 1667 Rotation (DIME) 1332 (3)	Surrounding Right Angled Triangled Triangled Triangled Triangled Triangled Triangled Triangle Theorem		Inventing Mazes 2081 (2) The Lewis Family 1770 Counter Placing 0591 Hex 0170 (*) Sets of Signs 1953 Logi-Puzzle 1302 Milk Crate 1685 Soft the Cards 0472 A Puzzling Walk (poster) 2250 (*)		Rumour (Calculating Pg 10) 2117 Which Hand Works Hardest? 2138	Secondhand Cars 1295 (2) Headlines 2235 Olympic Medals 1938 Pie Charts 1101 (2)	Frequency Graphs 1233 (2)	Sidings 0634 (2) The 3 Coin Problem 0161	What Chance? 0737 Monopoly 0750 Three Counters (DIME) 2009 Six Beads (OIME) 2010 One Dice (DIME) 1967 Two Dice (DIME) 1969 (2)	Level 6
	Square 1686 (*) Polygon Areas 2084 Trapezium to Parallelogram 0806 The Trapezium 0794		Pizza Paradise 2150 Orbits 0761	Volume of Cuboids 1257 Volume of Prisms 1094 (2) Diosticks 1861 Volumes and Surface Areas of Cylinders 1275 (2)	Equiangular Spirals 1999 (3) Back Bearings 1435 Journeys 1130 (2)	Using Pythagoras 0190 Looking for Right-Angles 0189 Pythagoras Problems 0191 Six Pyramids 2388 (3) Rising Gradients 1917 From A to B 1762 (*)		Master (MATH PUZ) 1653 An Islamic Design w/s 1734 Flying Engineers 1766 (2) Log block Sets 2101 Think 1706 Who has the Microcomputer? 1898 In Your Mind 0600 Domino Puzzte 0905 (2)			Population Pyramids (2) Population of Britain (2) Population of Britain (3)	Best Marks 2208 Average Pack of Workcards 0805 (3) A Mean Challenge! 2318 Grouping Data 2175 (2)	Pascal's Trangle O746 (4) Pinbal Experiments 2207	Putting it to the lest 2100 Probability 1269 (2) Probability Kitty 1614 Tossing Cons (INVEST Pg 38-40) 2194 (2) Numbers Up (DIME) 1968 (2) Five Beads (DIME) 1970 (2)	Level 7

End of level review: Handling Data 2354 (3)

Using and applying mathematics
The assessment criteria below are to be used to assess Using and applying mathematics in the context of Number and algebra and Shape, space and measures. Separate assessment criteria must be used for assessing Handling data at Key Stage 4.

Level	Making and monitoring decisions to solve problems	Communicating mathematically	Developing skills of mathematical reasoning	Ма
1	Candidates use mathematics as an integral part of classroom activities.	Candidates represent their work with object or pictures and discuss their work.	Candidates recognise and use a simple pattern or relation ship, usually based on their experience.	
2	Candidates select the mathematics for some classroom activities.	Candidates discuss their work using familiar mathematical language and are beginning to represent it using symbols and simple diagrams.	Candidates ask and respond appropriately to questions including 'What would happen if?"	
3	Candidates try different approaches and find ways of overcoming difficulties that arise when they are solving problems. They are beginning to organise work and check results.	Candidates discuss their mathematical work and are beginning to explain their thinking. They use and interpret mathematical symbols and diagrams.	Candidates show that they understand a general statement by finding particular examples that match it.	
4	Candidates are developing their own strategies for solving problems and are using these strategies both in working within mathematics and in applying mathematics to practical contexts.	Candidates present information and results in a clear and organised way, explaining reasons for their presentation.	Candidates search for a pattern by trying out ideas of their own.	
5	In order to carry through tasks and solve mathematical problems, candidates identify and obtain necessary information; they check their results, considering whether these are sensible	Candidates show understanding of situations by describing them mathematically using symbols, words and diagrams.	Candidates make general statements of their own based on evidence they have produced and give an explanation of their reasoning.	
6	Candidates carry through substantial tasks and solve quite complex problems by breaking then down into smaller, more manageable tasks.	Candidates interpret, discuss and synthesise information presented in a variety of mathematical forms. Their writing explains and informs their use of diagrams.	Candidates are beginning to give a mathematical justification for their generalisations; they test them by checking particular cases.	_
7	Starting from problems or contexts that have been presented to them, candidates introduce questions of their own, which generate fuller solutions.	Candidates examine critically and justify their choice of mathematical presentation, considering alternative approaches and explaining improvements they have made.	Candidates justify their generalisations of solutions, showing some insight into the mathematical structure of the situations being investigated. They appreciate the difference between mathematical explanation and experimental evidence.	
8	Candidates develop and follow alternative approaches. They reflect on their own lines of enquiry when exploring mathematical tasks; in doing so they introduce and use a range of mathematical techniques.	Candidates convey mathematical meaning through consistent use of symbols.	Candidates examine generalisations or solutions reached in an activity, commenting constructively on the reasoning and logic employed, and make further progress in the activity as a result.	
nance	Candidates analyse alternative approaches to problems involving a number of features or variables. They give detailed reasons for following or rejecting particular lines of enquiry.	Candidates use mathematical language and symbols accurately in presenting a convincing reasoned argument.	Candidates' report includes mathematical justifications, explaining their solutions to problems involving a number of features or variables.	
Exceptional Performance	Candidates consider and evaluate a number of approaches to a substantial task. They explore extensively a context or area of mathematics with which they are unfamiliar. They apply independently a range of appropriate mathematical techniques.	Candidates use mathematical language and symbols accurately in presenting a concise reasoned argument.	Candidates provide a mathematically rigorous justification or proof of their solution to a complex problem, considering the conditions under which it remains valid.	

The SMILE 2001 Network

The 2001 SMILE Network reflects the Mathematics National Curriculum 2000 and the KS3 Framework for Teaching Mathematics 2001. The Network is intended to assist teachers in planning and recording a scheme of work for each student according to their mathematical needs.

The Network can be used as a formative record of the student's progress throughout Key Stages 3 and 4 and as an aid to summative teacher assessment at the end of Key Stage 3 because the SMILE activities are arranged to reflect the sections of the Programme of Study.

A student's Network provides evidence of the extent to which the Programme of Study has been covered. The final decision about which Level Description best fits the student should be made in the light of work satisfactorily completed and understood and the teacher's knowledge of the student's mathematical ability.

The Inside of the SMILE Network - The programmes of study for mathematics

The SMILE Network contains a variety of different codes which are intended to provide help for teachers when setting work for a student. These are explained below.

World View 1886

Activities which require thought and planning before being set for students

Algebra Match w/s

2203

A SMILE activity which is a worksheet - found in the SMILE Worksheet Pack.

Written in lower case letters.

Target 200 (Calculating Pg 16)

A SMILE activity which can be found in SMILE 1783 Calculating Booklet, page 16

Written in lower case letters in brackets.

2114

Hundred Fit

A SMILE activity which is not usually stored with the workcards or worksheets.

(box) 2303 Written in lower case letters in brackets, e.g. (poster).

Solve it 0740 (2)

A SMILE activity. The number inside a bracket indicates a longer activity. The number gives a guide to the approximate expected length of the activity.

Up the Stairs 2185 (*)

A SMILE activity. Either investigative or practical where the work can only be

assessed after the activity has been completed.

Comparing Areas (DIME) 2291 Activities from other publishers and SMILE software are identified by the source written in **upper case letters** in brackets. Full details of all these are found on the

SMILE Commercial References Sheet, available from SMILE Mathematics.

The Outside of the SMILE Network

Assessment Grids

To aid the recording of:

- NFER results
- termly assessment and attainment grades
- individual action targets
- SEN and IEP's

Using and applying mathematics criteria reflect the three stands for Key Stage 4.

Other Resources

SMILE resources which are:

- Teacher Resources
- Support materials for students
- Additional resources

Teacher resources from SMILE - in numerical order

The following SMILE materials come as part of either a Full Class Set or a Single Copy Set and are not recorded on the inside of the SMILE Network.

1701 Post Half Posters Good display poster to encourage project work on area and

fractions.

2112 Imaginings A collection of lesson starters and enders, based upon 3-D

visualisation.

2176 Talking Poster Good display poster to encourage mathematical discussion.

2292 Towers (box) A game for revision for Key Stages 3 & 4, based upon Trivial

Pursuit.

2324 Reckonings A collection of lesson starters and enders, based upon

mental mathematics

2376 Maths in Your Head A collection of lesson starters and enders, based upon

mental mathematics

Support materials for students from SMILE - in numerical order

The following SMILE materials come as part of either a Full Class Set or a Single Copy Set and are not recorded on the inside of the SMILE Network.

1783 Calculating Booklet Each activity in this booklet has been referenced on the

SMILE Network from SMILE 2113 to SMILE 2126.

2002 Real Spirals A good resource for project work on spirals.

2096 Fraction Playing Cards A resource for students, also needed for SMILE 2097 and

SMILE 2105.

2163 Geometry FactsThis is referenced on many SMILE activities where students

need to find definitions of shapes and angles.

2226 Number Playing Cards A resource for students which is referenced on many SMILE

activities where students require number cards.

2323 Statisical Inv. Help Book A resource for students.

2364 Decimal Playing Cards A resource for students, also needed for SMILE 2365, SMILE

2366, SMILE 2368 and SMILE 2369.

Additional resources available from SMILE Mathematics

The following SMILE materials do not come as part of the classroom materials, but are for use as whole class lessons, to aid group work and differentiation.

Bridging Units 2 units suitable for Year 7.

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Whole Class Projects 8 projects, suitable for KS 3 and 4.

Additional resources from SMILE Mathematics for Assessment

The following pack does not come as part of the classroom materials.

Assessment Pack Provides starting activities and diagostic tests for Levels 2 to 6

Resource programs from SMILE Mathematics

The following programs do not come as part of the classroom materials.

1650 Take Part (DfEE) 1796 Plotter (GRAPH) 1903 Numbers (PROP/NO)

1702 Circle (INVEST) 1851 Regions (GRAPH) 2373 Queens (MOVE)

1776 Spirals (INVEST) 1853 Pinball (INVEST)



Inital Teacher Assessment

Network 6 - EP

April 2001

0001 - 2403

The grids below are designed to aid the recording of student assessment over a period of time.

						Key Stage 2
Key S	tage 3 Asses	ssment				
				All Commonweal Commonw	9 (2)	
			2 d a margarata	ation and the second se		
		Control of the contro	And the second of the second o			Key Stage 3
<u> </u>	:					TA SAT's
ev Sta	age 4 Assess	sment				
			and defining the second	The same property		Torgot
						Target Grade
						Predicted
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-		1	and a second			

		lue, Ordering ounding	~ ·	rs, Powers a			er 3ysten tions, Decim	nals, Percentages, Rat Proportion	io and	:	Number Operations	ٽ ر
	Place Value/ Number Systems	Ordering and Rounding	d Powers and Roots	Properties of Number	Directed Number	Fractions	Decimals	Percentages	Ratio	Addition	Subtracti	or
Level 6		Problems (Calculating Pg 22/23) 2126 Decimal Place Match w/s 2398	Power 0388 (2) Power Match w/s 2019 The Root of the Problem 2151 Squares, Cubes and Roots w/s 2095 Cube Root Calculator 2168	of Number Tum the Tables 1394 (2) Factor (PROP/NO) 1708 Define (PROP/NO) 1746 Multiplication Table Patterns 1395 (2) Prime Factors 0331 Number Names 1618	Adding Directed Numbers 0516 Positive or Negative? 0884	Fractions Fraction Squares 2156 Tower (SENSENO) 1666 Who Won? 0443 Adding One 2255 Route Six 1737 Adding Fractions 0402 Fraction Sort 0683 Fraction Wall 2 1528	Pecimals Fractions to Decimals Match w/s 2223 Decimal Difference 2366 Target 100 1631 Digit Division 1724 Decimal Flags w/s 2242	Percentages 54% is a little more than Half Marks 2004 Percentage Puzzle w/s 2389 Marks to Percentages w/s 1096 Fractions to Percentages 1097	Ratio Problems 1709 (2) Conversion Pack 2 2370 Similar Rectangles? 2134 Number Lines D (NUM) 2381 Car Trial Results 1696	I Addition	Subtracti	K
Level 7	Hindi Additions 1881 Panjabi Numbers 1937	Significant Figures 1202	Square Roots Investigation 1589 Powerful Rules 0592 (3) High Powered Matching w/s 2020 Paper Power 0463 Powers of Ten w/s 0614 x ^y Experiment 2040	Diagonal Multiples (PROP/NO Pg26) 1950 Consecutives 1319 (*) The Smith Family Circus 1658 (2) The Times' Crossword 0748 (2) Number Challenge 2312 (*) HCF & LCM 1673	Subtracting Directed Numbers 0517 Harder Negative Sequences 2297 Multiplying Directed Numbers 1278 Dividing Directed Numbers 1279	Early Egyptian Fractions 1771 (3) Unit Fraction Patterns 2043	Gelosia for Decimals 1800 Cuarlo 1639 Decimal Calculations 0153	Excess Luggage 2024 Percentage Sales 1208	Shnnking Earth 2065 A Mountain Walk 2006 Unibond Mixtures 1716 (2) Jeans 2067 A Millionaire 0791 The Champion Flea 1660 International Paper Sizes 1315 (2)			
Level 8	Nim (MATH PUZ) 1604	Range of Area 2167 (*)	Very Large Numbers 0843 (2) Very Small Numbers 0844 Going Scientific 2041 Using Standard Form 2183 I've got the Power 2271 Fibonacci and Square Root Spirals 2000 (2) A Problem of Power 1684 (±) Powers of Integers 2184 (±)	Quadratics and Primes 2229 Rational Numbers 2265				Inflation 0804 (3)	Pythagoras Dissection 2052 Golden Rectangle 0824 (4)			-1
Exceptional Performance	Cunelform Numbers 1793 Bi-Fractions 0414 (*) A Special Number 0557 Base -2 1433 (*) Babylonian Method 1399 (2)		Squares and Other Powers 1637	Irrational Numbers 2266 Proof By Contradiction 1677 Primes and Proof 0831 (4)		What's Recurring? 2092 (*)		Percentage Problems 2038	Proportion 1533 (2)			-1

ntal, Written and Calculator Methods	Equations, Formu	lae and Identities	**	Sequenc	es, Functio	ns and Graphs	
Multiplication Division Mixed 3elosia Dividing Calculator Brackets A	Algebraic Structure	Equations Random	Sequences Staircases	Pattern/ Generalisation	Mapping Number	Graphs Mappings to	Using Gr
1761 1940 (*) 2254	Squares and Quadrants (DIME) 2287 (2)	Code 0689	0315 Match Patterns	the Pages 0603	Machines (DIME) 1341 (3)	Mappings to Graphs 0182	9362
Closest Product Dividing Pairs Using Brackets 1725 1726 1463 Fewest Keys 2022	Anywhere on the Number	Number Puzzie w/s 0184	1313 Triangle Patterns	Tricky Sum (MA Poster) 1482	x for Tea 0187	Graphs to Mappings 0183	
1742 1638 Sum Dice 2154	Line w/s 0849	More Than, Less Than 2247	1432 Trick or Treat	Jumping (MATH PUZ) 1778	Simple Mappings (DIME)	Drawing the Line 0215	
Getting Closer Multiplication 1723 One Million Review (TARQUIN Poster) The Lost Divide 1961	Re-Grouping 0830	Number	0450 (*)	Quilts (INVEST)	1343 (2) Mappings 1378	y=mx (GRAPH)	
1656 Calcumaze 1738 Receating (Calculating Park)	Words won't lail me w/s 2237	Codex 0696 Solve it	Card Towers 2070	1798 AROSE (INVEST)	1378	1826 Parallel Lines	
Spreadsheet U/SZ Squares Missing	The Algebra Game	0740 (2)		1731 142857 Times Table		0430	
0760 ws 1711	2321 Algebra Tak-tiles			0784			
Errors (NÚM) 1454 (2) 1833	on a Grid (DIME) 2288 (4)			Bounce (DIEE) 1620 (*)			
Missing Signs (Calculating Pg 17) 2123							
1							
I of level review: Number and Algebra 2353 (2) Russian The Great Multiplication Divide In their 2064 1657 Place	Who's Rule A 2243	Solving Equations	Jugs (MATH PUZ)	The Chinese Triangle 1790	Algebra Puzzie	Drawing the Curve	Helicopter Photographs 1818 (7
2251	Game 2	0736 Is There a Solution? Pattern and 1540	1652 Fibonacci	1790 Hanoi (MATH PUZ) Cubes from 2326 (*)	1412	2018 y=ax ² 1948 (2) Mappings and Graphs	
Primes 1822 Four Signs w/s 1712	Algebra 2322 Match w/s 2203 A New Unit of Area Algebra (DME) Tak-Tiles 2290 (4)	(DIME) 1340 (3) SoMing Simultaneous	Type Sequences 2078	Triangles 0783 (*) Patterns in	Mappings 0837	(DIME) Equations 1342 (4) and Graphs 0744	1821 Time Distanc Graphs
Some Sums for Your M·nd w//s 2157	Algebra (DIME) Tak-Tiles 2290 (4) without a Grid (DIME) Find the 2289 (4) Operation	Letters 1538 for Length 0982	Ans and Exe 2042	Pascal's Triangle 1438 (2)	0745	Solving by Graphs Straight Line 0743 (2) Graphs 0817 (2)	1127
Calculator Tnal and	(x+1) ² 1665	Centigrade and Farenheit 0757 (2)		Shongo Networks 2182 (*)	Further Mappings (DIME) 1344 (2)	Simultaneous Equations from Graphs 2301	
Error 0155	Matching Algebraic Expressions w/s 0876 (2)	Solving Equations 1136 (2)		Investigating Queens (MOVE Pg32)	Quadratic Mappings (DIME) 1855 (3)	Parallels (GRAPH)	
2, 3, 4, 5 0162 Convince	Differences Brackets Between 2277 Squares	Salving Inequalities 2253		1785 (*) Predict (PROP/NO)		1820 Calculator Graphs	
Yourself 2061	0818 (3) Comparing Areas The Unknown (DIME)	What could x be?		1691 Counter		2191 Lines, Regions and	
	Square 2291 (3) 0616 Quadratic Equivalent Rules Expressions w/s 2328	2136		Hopping Puzzle 0344		negions and Inequalities 2272	
	Expressions w/s 2328 2211	4		Rectangle Diagonal 0439		Simultaneous Match 2281	
of level review: Number and Algebra 2354 (2)	Slart with a ²	Solving Harrier	Digit Sum	Threes and		Pactangles A	Thinking and
Four 4's 0179 (2) Target 24-a	0734 (3)	Solving Harder Equations 1137 (2)	Digit Sum 0563 Differences	Sevens 1486 (*)		Rectangles to Regions O755 Guess Inequality (GRAPH) Defining Regions 2397	Braking 1956
Target 24-a Three Digit Problem 2016	2215	Pamphlets 0485 (2)	1941 (*) Unpredictable Patterns			2234 Reciprocal Gradient 1052	The 'Smooth Out' Principle 1830
	0397 (2)	Problems 1308 (3)	2049 Strings 2029			Matching A Sketchy Activi	Motor-Cycle ly Ratios 1697 (;
	Päirs 1736 (2) Number	Substituting into Formulae 2258	2029			2166 Defining Regions 1511 (2) Sim. Equations 6 Inequalities 1537	Modelling wit Graphs 1774 (;
	Jumble 1682	Algebra Problems 2275				Gradients and Intercepts 2249	
		A Domino Trick 1916				Find The Line (GRAPH) 2396	
		Simple Quadratics 1415 (3)				Graph Matching 1707 (2)	
						When x is? 1951 (2)	
of levei review: Number and Algebra 2355 (3)						√	
Factorials! 1305	Two Digit Surns 1396 (2)	Points of Intersection 0756 (3)	Infinity 1369 (7)	Number Pattern Proof 0782	Composite Functions 1543 (2)	Quadratic Solutions 2140	Using Gradients 1281
A Disappearing Act 2130	Perpendicular Proof from 1420 Squares	Solving Quadratic Equations	Limits 1485 (2)	Geometric Progression		Matching Graphs 2044	Foxes and Chickens (GRAPH)
The Log Button 2051	0820 (3) Partners 1775 Tak Tile Areas	2192 (3) Pythagorean	Series Geometrically 1418 (3)	1439 (2) Converging Sequences		Lineover (GRAPH)	1852
	1323 Changing the Subject Prove your 1501	Triples 1676 (2)		Sequences 1389 (2)		1779 PointAndLines (GRAPH)	2106 Areas Under Graphs
	identify 0819 (2) Four Consecutive The 38th Triangle 1437	Diophantine Equations 1460 (3)				1840	1504 (i Velocity from
	Triangle 1437 Number 0741					2028	Distance Time Graphs 1568 (2
	Prove it 0722						Distance, Velocity and Acceleration 1569
	Subject of a Formula 1500						
	V						
of level review: Number and Algebra 2356 (3)							

			Geom	etrical Reas	oning			٠		-	rmations	C UIIM MCUSUICII		Construc tion & Loci	;
shc		3-D		Shape	Properties of Shape	Angle Properties	Topology	Similarity/ Enlargement	Rotation	Reflection	Translation/ Vectors	Combined Transformations	Co-ordinates		Μŧ
J10	· • ·	Wedges 1 (DIME) 1882 (3) More Than Two Blocks (DIME) 1880 (3) Soma Solids 1672 (2) Tricube Codes 2127 3-D Maze (MOVE) 1732 Building Cubes 1794 Making a 3 x 3 x 3 Cube (DIME) 2077	Plated Cube w/s 0098 Tetra-flexagon 0145 (2) Building on a square (DIME) 2076 Sketching Solids (DIME) 1335 (4)		Is it Rigid? 0340 Tangled Quadrilaterals 1764 Shape Up 2170 Four Triangles 1772 Two Triangles 1773 Using a Triangle 0364 Yes/No 1744 Paper Folding 1382 (5) Ask Me Another W/s 2240	Finding Exterior Angles 0269 Versa-Tiles 1419 (2) Angles from Tessellations 0284 Angles and Triangles 2162 Unmarked Angles aws 2173 Angle 4 Review 0877 (3) Acute/Obtuse 0433 Polygons; Interior Angles 0800 (2)	3-D Frameworks 1947 Traversable? 0426 Ealing Broadway 1958 (*)	Shapes that can grow w/s 1759 Scale Factor 0838 (2)	Rotational Symmetry 1955 Rotation 1112 (2) Rotate This Way w/s 0839	Using a Mirror (DIME) 05B1 (3) Reflect w/s 0577 Tricube Symmetries 2139 Symmetrical Cross Cut 0560 Points and their Images 0255 Line Symmetry A 5–10 (DIME) 1719 (3)	Translation 1123 (2) Vector Match 2228 Race Track w/s 0725 All out of line 0144 Tringg 1398 Queens (MOVE Pp33) 1714	Turning and Topping (DIME) 1336 (S)	Locale (COORD) 1715 3 in a line (COORD) 1836 Elephani (COORD) 1607	Cuboid Nets 0719 Start with 60° 2311 The Circumcircle 0213 (2) Inscribed Circle 0232 Compass Constructions 1170 (2) Polygons in Circles w/s 2375 Curry Tiles in Logo 2276 (2)	Hov OB
		Blue in the Face 2197 (*) Build and Balance (DIME) 1879 (3) Euler Solids (MA Poster) 1354 (3) Cutting Corners 2132 Cut a Cube 2232	Origami Dodecahedron 2218	Dissection Pairs w/s 1911 Weaving w/s 1647	Polygon Symmetries 1873 (*)	Angles in a Semi-circle 1935 Cyclic Quadrilateral 0165	Aboul Nodes 0342 The Inseparables 0492 (*)	Four Pentominoes 1928 (2) Areas of Similar Shapers 1559 (2)		Line Symmetry B 4-6 (DIME) 1893 (2) Line Symmetry B 7-10 (DIME) 1894 (2) . Reflections (DIME) 1337 (5)	Translations 1934 Race Game (MOVE) 1654 Journeys 1329 Vectors and Squares 2201 Avoiding Each Other (MOVE Pg30) 1777	Combining Transformations 1561 (2) Shape Sequences 2214 (*) Cube Cuts 0675 (*) Cross Stitch 2145 (*)	nts 2353 <u>(</u> 3)	Nets of Pyramids 0720 Spiralling Squares Patterns 2031 Constructive Designs 2141 (3) Tie w/s 2058 (2) Ellipses by Folding 2055 Painted Tyres 1912 (*)	Les: are O5
	<u> </u>	Wedges 2 (DIME) 1883 (3)	The Other Side 1857		Family of Quadrilaterals 0738 Polygons and Right Angles 1843 (*)	Regular Polygons 0731 (2) Angles in Circles 2062		Similar Thangles 2027 Lengths of Similar Objects 1259 (2) Nine Pentominoes 1929 (2) Similanty Problems 1560 Negative Scale Factor 0845 (2)		End of leve Combined Reliections 1562 (2)	Vectore Meet (0894 (2)) Vector Magnitudes 1013	Transforming Transforming Transforming Transless 2148 Matrices and Transformations 0797 (2) Square (box) 1688 (2) Wedges (DIME) 1338 (5) Transformations 1156 (2)	nts 2354 (2)		_
	<u>, L</u>	Spheres 1679 (4)			Folding 1681 Identical Halves W/s 1795			Similar Solids 1261 Matrices and Area 1922 (2)	Matrices for Rotations 1456 Combining Rotations 1457	End of leteration Matrices investigation 1458	Vectors 1177 More Vectors 1178 (2) Column Vectors 1179 (2) Dividing in a Given Ratio 1011 (2) Vector Areas 2050	Islamic Patterns in Logo 2093 A Transformation Technique 1400 (3) Scale Maps 2085 Isometries 1028 Matrices for Shears Investigation 1459	ents 2355	Minimum Information 1832	

End of level review: Shape, Space and Measurements 2356 (3)

		Measure	ments and	Mensuratio					Planning & Collecting Dat	a Repre	essing, senting &	Prob	ability	
rement	Area/ Perimeter		Circle Measurement	Surface Area/ t Volume	Angle	Trigonometry		Logic and Sets	Collecting Data	Interpr Displaying Data	eting Data Analysing & Interpreting Data	Probability		
?	World View 1886 Chocolate Areas 0120	Parallelogram Problems 0227	Round the Bend 2013 Circle Coverage	Volume of Cubes 0142 Cuboids from Matchboxes	Bearings and Scale Drawings 1434 (2) Pilot (MOVE)	Surrounding Right Angled Triangles w/s 2056 Short, Middle,		Inventing Mazes 2081 (2) The Lewis Family 1770	Rumour (Calculating Pg 10) 2117	Secondhand Cars 1295 (2) Headlines 2235	Frequency Graphs 1233 (2)	Sidings 0634 (2) The 3 Coin Problem 0161	What Chance? 0737 Monopoly 0750	
	Rectangle Areas 1320 Area of a Parallelogram	Shearing a Triangle 0177	2149 Kil Bag 2060	0381 Volumes 2 0143	1,667 Rotation (DIME) 1332 (3)	Long 1902 Checking Pythagoras 0188		Counter Placing 0591	Works Hardes!? 2138	Olympic Medals 1938 Pie Charts			Three Counters (DIME) 2009	9
	From Parallelogram to Rectangle 0228							Hex 0170 (*) Sets of Signs 1953 Logi-Puzzle 1302		1101 (2)			Six Beads (DIME) 2010 One Dice (DIME) 1967	evel
	w/s 2222 Triangle Problems 0236 (2) Shearing Parallelograms							1302 Milk Crate 1685 Sort the Cards 0472					Two Dice (DIME) 1969 (2)	Le
	0226	V						A Puzzling Walk (poster) 2250 (*)						
3	Square 1686 (*)		Pizza Paradise 2150	Volume of Cuboids 1257	Equiangular Spirals 1999 (3)	Using Pythagoras 0190	<u>. </u>	Master (MATH PUZ) 1653	End of level revi	Line of Best Fri 0574	Data 2353 (2) Best Marks (2208)	Forty Towers 0684	Putting it to the lest 2100	
	Polygon Areas 2084 Trapezium to Parallelogram 0806		Orbits 0761	Volume of Prisms 1094 (2)	Back Bearings 1435	Looking for Right- Angles 0189		An Islamic Design w/s 1734		Population Pyramids 2188 (2)	Average Pack of Workcards 0805 (3) A Mean Challenge!	Pascal's Triangle 0746 (4)	Probability 1269 (2) Probability Kitty 1614	
	0806 The Trapezium			1861 Volumes and Surface Areas	1130 (2)	Problems 0191 Six Pyramids		Flying Engineers 1766 (2) Logiblock Sets		Britain 2169 (3)	2318 Grouping	Experiments 2207	Tossing Coins (INVEST Pg 38-	/
	0794			of Cylinders 1275 (2)		2388 (3) Rising Gradients		2101 Think 1706			2175 (2)		2194 (2) Numbers	P
						1917 From A to B 1762 (*)		Who has the Microcomputer?					(DIME) 1968 (2) Five Beads	Ž
						1762 (*)		In Your Mind 0600					Five Beads (DIME) 1970 (2)	P
								Domino Puzzle 0905 (2)						
							<u>. </u>		_ End of level revi				92.02	
	irregular Areas 0812 (2)		DIY Earrings 2032	Solid Expressions 2383 (2)	Directions (DIME) 1333 (4)	Trig Lines 1921 (2) Opposite,		Blocked (poster) 1788 Tum it		Histograms 2295	Cumulative Frequency from Grouped Data 1267 (2)	Permutaling Tricubes 2159	Seven Beads (DIME) 1971 (2)	
			Circle Cut w/s 2400 Circle Packing	The Biggest Vase 1258 (2)		Adjacent and Hypotenuse 2082		Over 2069			Grouped Data, Reviewed 2325 (2)		Find the Fakes 1670	∞
	,		Packing 2103	Cubes 0399 (*)		Pythagoras Plus 2187 (*)		1345 Shunting 0477			Cumulative Frequency and Quartiles 1007 (2)		Probability Kitty 1646 Combined	
						Another Tng Line 2109							Probability 1704 (2)	9
						Using Sine and Cosine 1 2137								eV
						Using Sine and Cosine 2 2144								Ĭ
			Clover Leaf	Cones		Tra for Any	<u>. </u>	The Coin	End of level rev	view: Handlin			Combined	
			Clover Leaf 0827 (2) Circles, Triangles and Hexagons	Cones 1541 (2) Packing		Trig for Any Triangle 2220 Big Wheel		The Coin Problem 1918 (*)			Lies, Damned Lies and Statistics 0882 (2)		Probabilities from Tree Diagrams 1272 (2)	
			1763 (2) Sectors of Circles 0813 (2)	Balls 2244 Best Fitting		Big Wheel 1784 Sin and Cos Graphs							Probably Probable? (INVEST Pg43) 2014	
			Darts Probability 0796 (2)	Peg 0595 (*) Optimising 1885		1939 (3) Exploring Sine Curves 2206(*)								la l
			Approximation and π 0793 (2)	1885		Thinking in Three Dimensions 1487 (2)								ptior rman
			Fabric Designs 2036			Angles Between								Exceptiona Performanc
			Grey Areas 2135 (*)			Planes 1488 (2) Post Box 0454 (*)								— п
						Trig Problems 1517 (2)								

End of level review: Handling Data 2356

Using and applying mathematics
The assessment criteria below are to be used to assess Using and applying mathematics in the context of Number and algebra and Shape, space and measures. Separate assessment criteria must be used for assessing Handling data at Key Stage 4.

Level	Making and monitoring decisions to solve problems	Communicating mathematically	Developing skills of mathematical reasoning	Mari
1	Candidates use mathematics as an integral part of classroom activities.	Candidates represent their work with object or pictures and discuss their work.	Candidates recognise and use a simple pattern or relation ship, usually based on their experience.	
2	Candidates select the mathematics for some classroom activities.	Candidates discuss their work using familiar mathematical language and are beginning to represent it using symbols and simple diagrams.	Candidates ask and respond appropriately to questions including 'What would happen if?"	_
3	Candidates try different approaches and find ways of overcoming difficulties that arise when they are solving problems. They are beginning to organise work and check results.	Candidates discuss their mathematical work and are beginning to explain their thinking. They use and interpret mathematical symbols and diagrams.	Candidates show that they understand a general statement by finding particular examples that match it.	
4	Candidates are developing their own strategies for solving problems and are using these strategies both in working within mathematics and in applying mathematics to practical contexts.	Candidates present information and results in a clear and organised way, explaining reasons for their presentation.	Candidates search for a pattern by trying out ideas of their own.	
5	In order to carry through tasks and solve mathematical problems, candidates identify and obtain necessary information; they check their results, considering whether these are sensible	Candidates show understanding of situations by describing them mathematically using symbols, words and diagrams.	Candidates make general statements of their own based on evidence they have produced and give an explanation of their reasoning.	
6	Candidates carry through substantial tasks and solve quite complex problems by breaking then down into smaller, more manageable tasks.	Candidates interpret, discuss and synthesise information presented in a variety of mathematical forms. Their writing explains and informs their use of diagrams.	Candidates are beginning to give a mathematical justification for their generalisations; they test them by checking particular cases.	
7	Starting from problems or contexts that have been presented to them, candidates introduce questions of their own, which generate fuller solutions.	Candidates examine critically and justify their choice of mathematical presentation, considering alternative approaches and explaining improvements they have made.	Candidates justify their generalisations of solutions, showing some insight into the mathematical structure of the situations being investigated. They appreciate the difference between mathematical explanation and experimental evidence.	
8	Candidates develop and follow alternative approaches. They reflect on their own lines of enquiry when exploring mathematical tasks; in doing so they introduce and use a range of mathematical techniques.	Candidates convey mathematical meaning through consistent use of symbols.	Candidates examine generalisations or solutions reached in an activity, commenting constructively on the reasoning and logic employed, and make further progress in the activity as a result.	
Jance	Candidates analyse alternative approaches to problems involving a number of features or variables. They give detailed reasons for following or rejecting particular lines of enquiry.	Candidates use mathematical language and symbols accurately in presenting a convincing reasoned argument.	Candidates' report includes mathematical justifications, explaining their solutions to problems involving a number of features or variables.	
Performance	Candidates consider and evaluate a number of approaches to a substantial task. They explore extensively a context or area of mathematics with which they are unfamiliar. They apply independently a range of appropriate mathematical techniques.	Candidates use mathematical language and symbols accurately in presenting a concise reasoned argument.	Candidates provide a mathematically rigorous justification or proof of their solution to a complex problem, considering the conditions under which it remains valid.	

The SMILE 2001 Network

The 2001 SMILE Network reflects the Mathematics National Curriculum 2000 and the KS3 Framework for Teaching Mathematics 2001. The Network is intended to assist teachers in planning and recording a scheme of work for each student according to their mathematical needs.

The Network can be used as a formative record of the student's progress throughout Key Stages 3 and 4 and as an aid to summative teacher assessment at the end of Key Stage 3 because the SMILE activities are arranged to reflect the sections of the Programme of Study.

A student's Network provides evidence of the extent to which the Programme of Study has been covered. The final decision about which Level Description best fits the student should be made in the light of work satisfactorily completed and understood and the teacher's knowledge of the student's mathematical ability.

The Inside of the SMILE Network - The programmes of study for mathematics

The SMILE Network contains a variety of different codes which are intended to provide help for teachers when setting work for a student. These are explained below.

World View

Activities which require thought and planning before being set for students.

1886

2203

2114

Algebra Match w/s A SMILE activity which is a worksheet - found in the SMILE Worksheet Pack.

Written in lower case letters.

Target 200 (Calculating Pg 16) A SMILE activity which can be found in SMILE 1783 Calculating Booklet, page 16

Written in lower case letters in brackets.

Hundred Fit

A SMILE activity which is not usually stored with the workcards or worksheets.

Written in lower case letters in brackets, e.g. (poster).

(box) 2303

Solve it 0740 (2)

A SMILE activity. The number inside a bracket indicates a longer activity. The

number gives a guide to the approximate expected length of the activity.

Up the Stairs 2185 (*)

A SMILE activity. Either investigative or practical where the work can only be

assessed after the activity has been completed.

Comparing Areas (DIME) 2291 Activities from other publishers and SMILE software are identified by the source written in **upper case letters** in brackets. Full details of all these are found on the

SMILE Commercial References Sheet, available from SMILE Mathematics.

The Outside of the SMILE Network

Assessment Grids

To aid the recording of:

- NFER results
- termly assessment and attainment grades
- individual action targets
- SEN and IEP's

Using and applying mathematics criteria reflect the three stands for Key Stage 4.

Other Resources

SMILE resources which are:

- Teacher Resources
- Support materials for students
- Additional resources

Teacher resources from SMILE - in numerical order

The following SMILE materials come as part of either a Full Class Set or a Single Copy Set and are not recorded on the inside of the SMILE Network.

1701 Post Half Posters Good display poster to encourage project work on area and

fractions.

2112 Imaginings A collection of lesson starters and enders, based upon 3-D

visualisation.

2176 Talking Poster Good display poster to encourage mathematical discussion.

2292 Towers (box) A game for revision for Key Stages 3 & 4, based upon Trivial

Pursuit.

2324 Reckonings A collection of lesson starters and enders, based upon

mental mathematics

2376 Maths in Your Head A collection of lesson starters and enders, based upon

mental mathematics

Support materials for students from SMILE - in numerical order

The following SMILE materials come as part of either a Full Class Set or a Single Copy Set and are not recorded on the inside of the SMILE Network.

1783 Calculating Booklet Each activity in this booklet has been referenced on the

SMILE Network from SMILE 2113 to SMILE 2126.

2002 Real Spirals A good resource for project work on spirals.

2096 Fraction Playing Cards A resource for students, also needed for SMILE 2097 and

SMILE 2105.

2163 Geometry FactsThis is referenced on many SMILE activities where students

need to find definitions of shapes and angles.

2226 Number Playing Cards A resource for students which is referenced on many SMILE

activities where students require number cards.

2323 Statisical Inv. Help Book A resource for students.

2364 Decimal Playing Cards A resource for students, also needed for SMILE 2365, SMILE

2366, SMILE 2368 and SMILE 2369.

Additional resources available from SMILE Mathematics

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Bridging Units 2 units suitable for Year 7

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The following programs do not come as part of the classroom materials.

1650 Take Part (DfEE) 1796 Plotter (GRAPH) 1903 Numbers (PROP/NO)

1702 Circle (INVEST) 1851 Regions (GRAPH) 2373 Queens (MOVE)

1776 Spirals (INVEST) 1853 Pinball (INVEST)

1828	Find the Shape	2171	Pie Chart Match	2339**	2 x Table
1844	Straight Lines	2173	Unmarked Angles	2340**	3 x Table
1847	Symmetrical Triangles	2174	The Mode	2341**	4 x Table
1849	100 Search	2178a	(Volumes)	2342**	5 x Table
1856	What Shapes?	2186	Missing Pieces	2343**	6 x Table
1862	Even Animal	2188a-b	(Population Pyramids)	2344**	7 x Table
1868	Symmetry Match (A3)	2193	Number Square Words	2345**	8 x Table
1902a	(Short Middle Long)	2199	Percentage Estimation	2346**	9 x Table
1904	Find the Operation	2203	Algebra Match	2347**	10 x Table
1907	About How Long?	2205a	(Making 25p)	2348**	11 x Table
1911	Dissection Pairs	2206a	(Exploring Sine Curves)	2349**	12 x Table
1914	Adding Counters	2207a	(Pinball Experiments)	2357	Matching Algebraic Exps
1919	How many Centimetre Squares?	2211	Equivalent Expressions	2358	Angle Fit
1931a	(Which Scripts?)	2212	10 Search	2360	Rotational & Line Symmetry Review
1942	Growing Patterns	2213	Sum Message	2362	Decimal Routes
1945	Square Diagonals	2216	From Matches to Mappings	2372	Powers of Ten Flags
1959a-c	d (Making One)	2219a	(Origami Cube)	2382 2384	Areas of Polygons Angles in a Regular Hexagon
1999a	(Equiangular worksheet)	2220a	(Trig for any Triangle)	2387	Multiples of Ten
2003a*	(Birthday Dates)	2222	Equal Areas?	2389	Percentage Puzzle
2019	Power Match	2223	Fraction to Decimal Match	2391	Matching Weights
2020	High Powered Matching	2224a	(Shajjad's Collection)	2398	Decimal Places Match
2022a	(Fewest Keys)	2225a	(Wildlife Collection)	2400	Circle Cut
2023	Alphabet Symmetry	2230	Which has the Largest Area?	2401a	(Play Your Cards Right)
2031a+	(Spiralling Squares)	2233	(Cafe Menu)	2402	Equivalent Fractions Sort
2034a	(Likely or Unlikely)	2237	Words Won't Fail Me?		
2035	Symmetry Codes	2239	Putting in Order		
2037a	(3 in 1 Maze)	2240	Ask me Another		
2045	Hot and Cold	2242	Decimal Flags		
2054a	(4 Sides)	2247a	(More Than, Less Than)		
2056	Surrounding Right-angled Tri.	2251	Put them in their Place	DINAF	and the sale was also be sale
2058	Tie	2252	Something and a Half		produced worksheets are available from Tarquin
2079a	(Sketchy Activity)	2256	Matching Fractions		ate available from farquin ations. See Commercial
2 082a	(Opp, Adj and Hypotenuse)	2258a	(Substititing into Formulae)		ince Sheet
2088	What's the Difference?	2259	Multiplication Flags	1331	(Equal Angles)
2089	Oxford Street	2261	Shape-Tiles	1332	(Rotation)
2095	Squares, Cubes and Roots	2262	Find the Route	1333	(Directions)
2107	Oxfam Collection	2264	Plus and Minus Grids	1339	(Flags)
2110	Number Sort	2267a	(Introducing Ratio)	1340	(Pattern and Notation)
	c+ (Rot Symmetry Jigsaws)	2274	abc	1341	(Number Machines)
2129	Tens and Fives	2278	Mapping Jigsaw	1342	(Mappings and Graphs)
2131	Filing Cards		I (Island Game)	1343	(Simple Mappings)
2133	Out of 100	2292a	(Towers)	1344 1866	(Further Mappings) (Reflection Activities)
2134a	(Similar Rectangles)	2296	Mapping Rectangles	2073	A1, A2, A3, A4
2143	Percentages of Money	2305	Hexagon Puzzle	2074	B2, B6, B10 Tricube
2147	Odd Animal	2306	Patterns on a Line	2075	C1, C5, C6, C8 Puzzles
2151a	(The Root of the Problem)	2308	Word Match	2076	D1, D5, D8, D10
2153	£1 Search	2310	Sequences Jigsaw	2077	E3, E7, E10
2154a	(Sum Dice Number Cards)	2321a	(The Algebra Game)	2286	A3, A4
2155a	(Visualising)	2330	Missing Angles	2287	A5, A6
	Some Sums for your mind	2332	Decimals on a Number Line	2288	B1- B6 Algebra through Geometry
	Turning Green	2333	Quiz Times	2289	C1- C6 Geometry D1 - D6
	(Fraction Ruler)	2336a	(Comparing Ratios)	2290	
2161	Shape Names	2338	Decimal Search	2291	E1, E3, E4



Worksheet List

0001 - 2403 April 2001

The SMILE Worksheet pack contains one copy of the following worksheets for duplication in school. Those marked with:

- * should be duplicated onto card so that it can be used to make models, to play a game, to use as a template, etc.
- + should be duplicated onto coloured paper.
- **should be made up into an 8 page booklet.

Where the name of the activity is in brackets, this indicates that an additional card is needed.

0027	Number Squares	0475c	(All Change)	1376a	(Jobs in Order)
0028	Number Squares 2	0476	Mappings	1379	Fishing
0030	Number Squares 4	0493	Sam Shape	1390	Multiplication Table Facts
0031	Find the Number 1	0510	Radar		(Tens Counters)
0033	Find the Number 3	0550	Adding Shifts		(Versa-Tiles)
0034	Find the Number 4	0577	Reflect		(8/12/16 - point circles)
0057	Fractions 3	0579a	(Cut-outs for Two Loops)	1463	Use Brackets!
0058	Fractions 4	0592a	(Powerful Rules)	1525	Economical Weaving
0066a*	(Napiers Rods)	0614	Powers of Ten	1555	Mystic Rose
0069	Cardioid	0617	Looking Around	1557	Spirals
0074	Sum and Product	0696a	(Number Codex)	1565	Symmetry
0098	Plaited Cube	0697	Hidden Shapes	1570	Pounds and Pence
0099	Sum and Product Again	0705	Cross Puzzles	1592	Two Cuts Investigation
0114	Nines	0713	Jumping Jack	1627	Self Portrait
0121	100 Square Patterns	0725	Race Track	1628a*	(Eight Squares cut-out)
0168	Right Angled Triangles	0730	Rotations	1629	Pentagons
0178	Rectangles	0735	Knots	1635	The Key to Success
0184	Number Puzzle	0738a	(Family of Quadrilaterals)	1636	Calculator Flags
0242	Cracking the Code	0777	Satellite Signals	1643a*	Cards (Lucky Dip)
0251	Mirror Symmetry	0808a	(Code Breaking)	1643b	Score Sheet (Lucky Dip)
0259	Shading Fractions	0824h	Pentagram (Golden Rectangle)	1647	Weaving
0264	Cartoon Co-ordinates	0824j	Rectangle (Golden Rectangle)	1668a	(Mapping Puzzle)
0272	A Vehicle Survey	0839	Rotate This Way	1669	Sim
0288	Rolling Two Dice	0845a	(Negative Scale Factor)	1679d-1	(Spheres)
0292	Doubling Patterns	0849	Anywhere on the Number Line	1703	Find the Uncle
0316	Counting On/Back	0852a	(Colouring Triangles)	1711	Missing Digits
0327	Centres of Rotation	0853a	(Grids)	1712	Four Signs
0330a	(Multiple Patterns)	0868	Evens	1717	Add-a-square
0341	Nodes	0869	Puzzle Worksheet	1733	An Even Code
0346	Sequences in Squares	0881	24 Squares	1734	An Islamic Design
0352	Table Squares	0894b	(Force Meet Pack)	1749a	(Decimal Jigsaw)
0354	Tom the Bowling Champ	0895	Jumps	1753	Matching Pairs
0359	How Many Colours?	0905a	(Domino Puzzle)	1758	Co-ordinate Messages
0367	Fraction Wall	1095	Percentages	1759	Shapes That Can Grow
0383	Building Shapes	1096	Marks to Percentages	1760	One Straight Cut
0384	Changing Grids	1278a	(Multiplying Directed Numbers)	1761	Gelosia Problems
0390	Surfaces	1299	Tangram Arrows	1768	Zigzag
0396	Hexagons	1309	More Vector Messages	1792a	(Feeling Hungry)
0397a*	(Operations)	1317**	Mult & Div by 10, 100, 1000	1795	Identical Halves
0404	Solids	1321	Prism or Pyramid?	1799	Boxes
0424	How Many Routes?	1355	Halves and Quarters	1812	Find Four Squares
0448	Favourite Colours	1358	Joining Multiples	1813	Crossword
0456	Midpoint Sequences	1359	Joining Odds and Evens	1818a	(Helicopter Photographs)
0470	Nephroid	1360	Pictures from Multiples	1824	Silver Earrings



EQUIPMENT LIST

SMILE 0001 - 2403 April 2001

The following are likely to be needed for many of the SMILE activities.

angle indicators box of coins

box of shapes (labelled with

names)

box of solids

calculators (4 function, scientific

and graphic)
centicubes
compasses
computer
counters
dice

DIME solids

dominoes drawing pins elastic bands

glue

logiblocks (Attribute blocks)

maps - (LT map etc.)

matches
match boxes
metre rule
mirrors
multilink cubes

pack of cards paper clips

pegs
pegboards
pentominoes
pinboards
protractors
rotograms

rulers (mm and cm)

scissors sellotape set square Tak-Tiles (DIME) tape measure

The following are needed specifically for only one or two SMILE activities.

ball

base 10 apparatus cocktail sticks

Highway Code
Karnaugh map (4 x 4 grid to
accommodate logiblocks)
2 loop and 3 loop boards
marbles

Napier's Rods (optional)

newspapers

probability maze shopping catalogue Soma Cube stop clock thermometer Tricubes (DIME)

weights

The following types of paper will be required.

1cm square paper 1cm square dotty paper 2cm square paper 1cm isometric paper

1cm isometric dotty paper

2cm isometric paper 100 squares

multiplication squares

plain paper tracing paper gummed paper

card

graph paper (1mm and 2mm) paper circles (filter papers)

gummed strips

Materials to support the use of technology in the mathematics classroom.

LOGO, a spreadsheet and a geometry drawing package.

Spreadsheets from SMILE Teachers' book (SMILE)

Hints and Answers Book (SMILE)

SMILE MATHEMATICS

Isaac Newton Centre

108A Lancaster Road London W11 1QS

Tel. 020 7598 4841 Fax. 020 7598 4838

Email. info@smilemathematics.co.uk Web. www.smilemathematics.co.uk

For a list of commercially published materials which are referred to on the 2001 SMILE Network, please see the Commercial Reference Sources sheet obtainable from SMILE Mathematics.

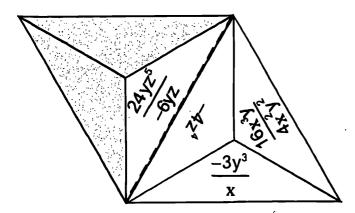
SMILE Mothematics Numbered Set 37 (red File) 2350-2403.



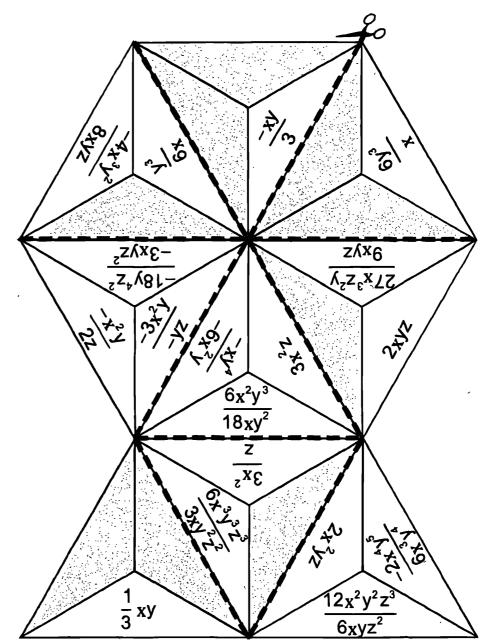
Matching Algebraic Expressions

- 1. Cut out the 9 equilateral triangles along the dotted lines.
- 2. Match the equivalent algebraic expressions:

Example:
$$\frac{24 \text{ yz}^5}{-6 \text{yz}} = \frac{24 \text{ x y x z x z x z x z x z x z}}{-6 \text{ x y x z}}$$
$$= -4z^4$$

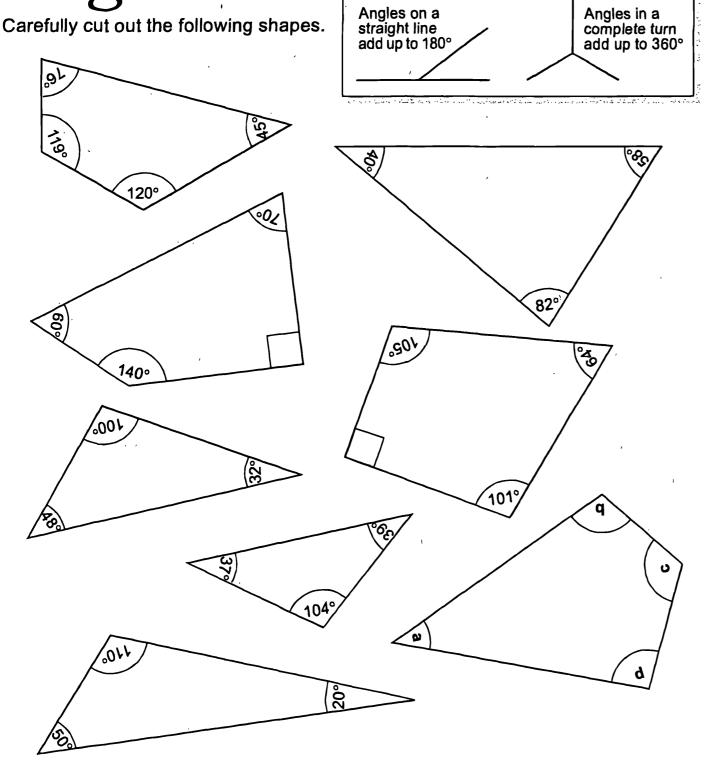


- 3. Record your working out in your book.
- 4. Fit the equilateral triangles together to make one large triangle. The shaded sections mark the edges of the triangle.



Angle Fit

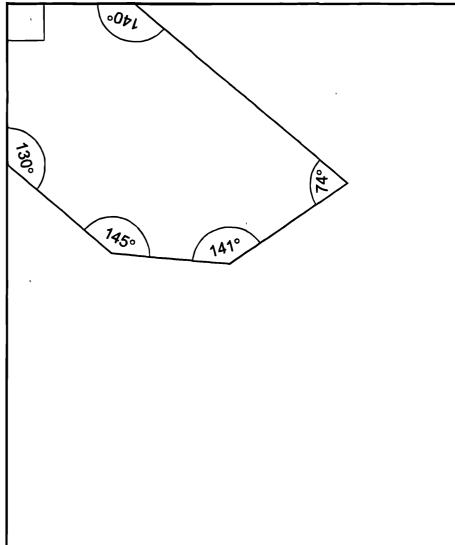
Carefully cut out the following shapes.



The following angle facts might help:

Smile Worksheet 2358

By looking at the size of the angles, fit them in this rectangle. 1.



2. Calculate angles a, b, c and d.

a =

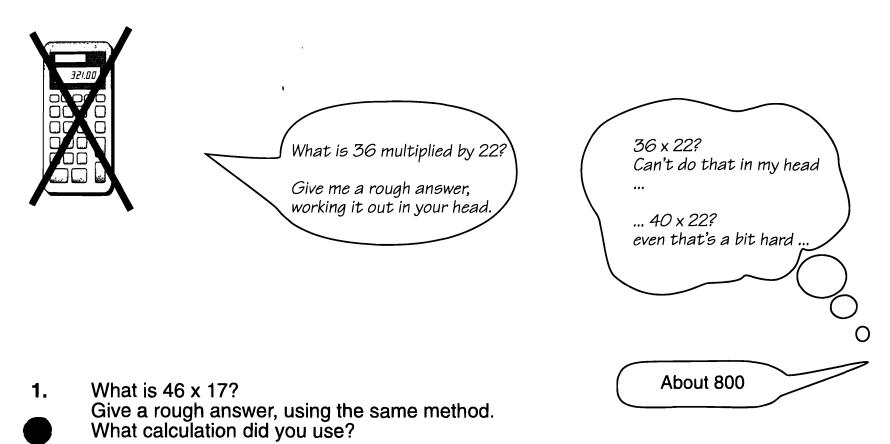
b =

c =

d =

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Approximate Solutions



2. Copy and complete this table:

calculations	rough calculations	rough answers	
583 ÷ 18	600 ÷ 20	30 _	rough
408 x 68			400 x 600 ÷ 30 70 x 600 ÷ 20
875 ÷ 23			$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
79 x 22			rough
576 ÷ 27			(28000 20 \
67 x 81			160 45

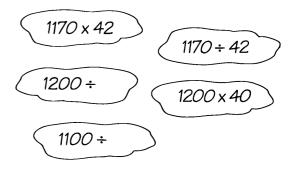
3. Choose your own rough calculations to complete this table:

calculations	rough calculations (approximations)	rough answers (approximate solutions)
71 x 88		
383 ÷ 53		7
49 x 48		

4. Here is a problem ...

... and some calculations.

There are 1170 pupils in the school.
There are 42 tutor rooms.
Work out approximately, how many
pupils are in each tutor group.



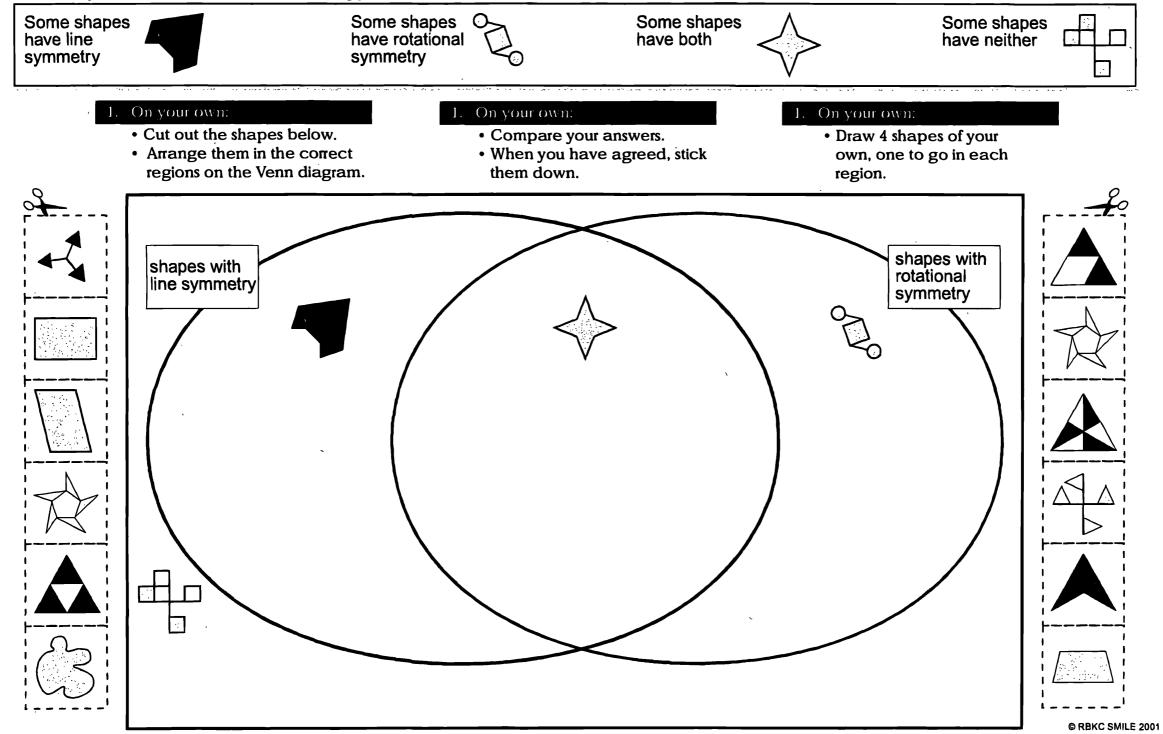
- a) Which two calculations must be wrong?
- b) Which two calculations give approximate solutions to the problem?
- c) Which calculation would you use?
- 5. Copy and complete this table in your book.

	problems	calculations	approximations	approximate solutions
a)	There are 36 eggs in a tray. A box of eggs contains 12 trays of eggs. About how many eggs are in a box?			
b)	About how many 62 seater coaches are needed to take a school of 1796 students on a trip?			
c)	A bottle of cola contains 1950ml. About how many millilitres in 11 bottles?			
d)	A bottle of cola contains 1950ml. 205ml are needed to fill a cup. About how many cups can be filled?			

- 6. A job pays £214 per week.
 About how much is this in one year (52 weeks)?
- 7. Each student needs 27 centicubes to build a larger cube. There are 29 students in the class.
 About how many centicubes are needed?
- 8. One pint of milk is sufficient for 22 cups of tea.
 About how many pints are needed for 485 cups of tea?

Rotational and line symmetry review

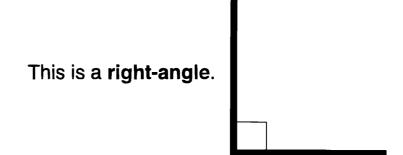
An activity for two. You will both need a copy of this worksheet.



Right-angle or not?

You will need tracing paper.

There are many **right-angles** around. For example, the corners of this card are right-angles.



- A H
- 1. Trace the right-angle and place it over the top of the angles to find out which ones are right-angles.
- 2. Copy and complete the table.

	l n. i .
Angle	Right-angle
Α	Yes
В	No
С	
D	
E	
F	
G	
Н	
J	
J K	
L	

- **3.** Draw a right-angle in your book.
- **4.** Find **5** things around your classroom that have right-angles.

Write a list of them in your book.

Check these with your teacher.

Smile Worksheet 2362

Decimal Routes

Start at Start and find your way to the End

1. You can only move









2. You can only go into the squares when the answer is 3 or 1.5.

3. Shade in your route as you go along.

				Start	7	palanda koko 1		
0.2 + 1.3		2 x 1.5		1.5 x 2 3	0.7 + 0.8			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
15 ÷ 10	4 – 0.5	7 – 5.5	18 ÷ 5	0.5 + 1.5	1.4 x 11	4.5 – 1.5	1÷2	1 + 0.05
1.1 + 0.4	2.5 – 1	4.5 ÷ 3	0.5 + 1	10 – 8.5	16 ÷ 10	3 x 0.5	0.5 + 0.6	1+5
1.8 ÷ 0.4	18 – 0.3	5.2 ÷ 2	6 + 3.3	0.5 x 6	7.5 ÷ 5	1.6 – 0.1	0.5 x 10	3 x 0.1
0.4 x 10	2.3 + 0.7	6.5 – 5	0.2 x 1.5	1.4 + 1.4	3 x 1.5	1 ÷ 5	5 ÷ 10	3 x 0.5
6.3 – 3	5.3 – 2	0.75 x 2	1 x 0.3	1.6 + 1.3	1.5 + 2.5	0.2 x 1.5	7 ÷ 5	0.2 ÷ 4
3 ÷ 0.5	6.5 ÷ 4	12 x 0.25	4 ÷ 3	0.1 – 1.5	3.5 – 0.1	1.3 + 1.2	6 ÷ 0.5	4-3
3.5 ÷ 2		30 ÷ 20	_		11.5 + 10		7.1 – 3.1) 2.

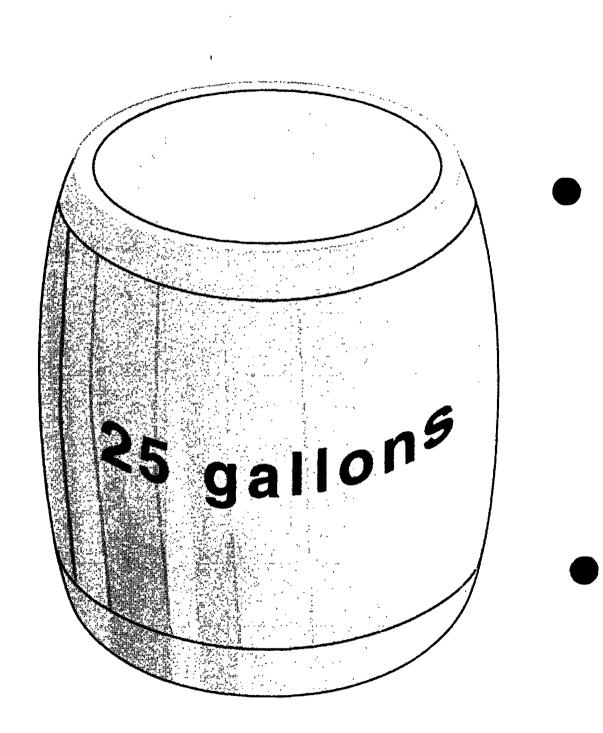
You should record any working out here.

Conversion Pack 1

An activity for 2 people

- Complete the problems on cards A F.
 You might find the conversion chart on the back of this envelope helpful.
- 2. Record your answers in your book. Show your working. Remember to include the units in your answers.
- 3. You need to know the conversions. Record them in your book and test each other on them.





How many pints?

Match the pairs of cards.

a) 2km

1) 1350cm

b) 135cm

2) 0.265km

c) 26.5mm

3) 2000m

d) 13.5m

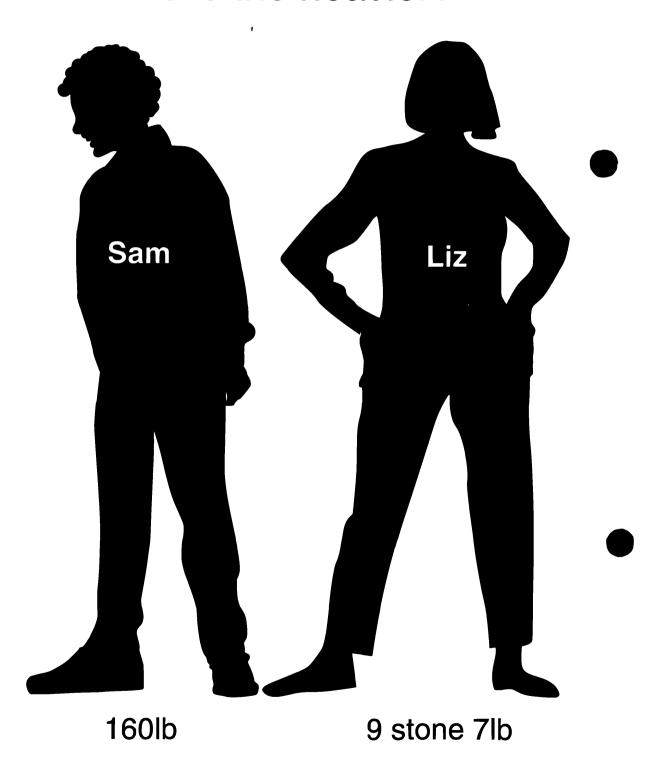
4) 1350mm

e) 265m

5) 2.65cm

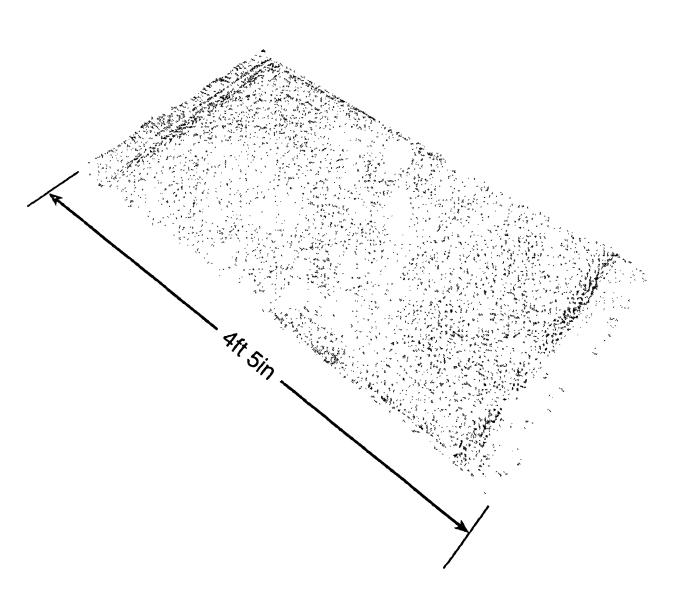


Who is the heavier?





A rug is 4 foot 5 inches long. How many inches is this?





Two students are doing a science experiment.

They take 57ml

— 1 litre —

from a 1 litre measuring beaker.

How much liquid is left in the beaker?



The hand baggage allowance on the flight to Kenya is 5kg.

Tim's bag contains:



Is Tim's bag too heavy?

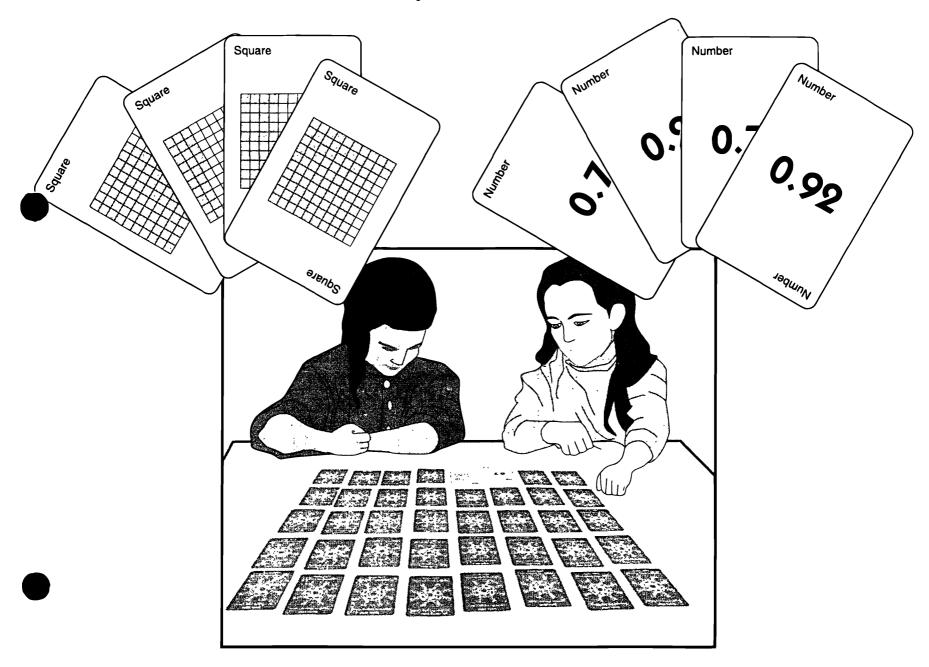
Higher decimal win

A game for 2 players.

You will need the SMILE Decimal Playing Cards.

Take out the 13 cards with 'Squares' and the 13 cards with 'Numbers'. Shuffle the cards.

Deal the cards, face down, in front of you.



Each player turns over one card.

The player with the higher decimal wins that round and keeps both cards.

Carry on until you have used all the cards.

The player with the most cards wins.

Variation

Try turning over 2 cards at a time, adding the two numbers together. The player with the higher decimal wins.

Decimal differences

A game for 2 players.

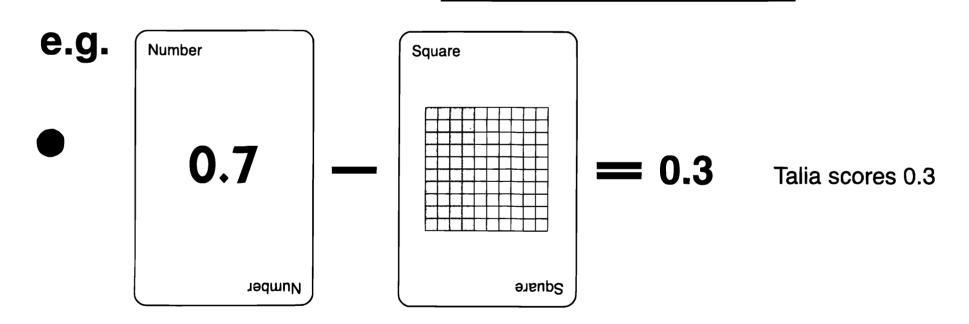
You will need the SMILE Decimal Playing Cards.

Take out the 13 cards with 'Squares' and the 13 cards with 'Numbers'.
Shuffle the cards.
Deal the cards, face down, in front of you.



Each player turns over one card.

The player with the higher decimal wins that round, and their score is the difference between the two decimals.



Record your results.

0.7 - 0.4 = 0.3	Talia	Janice
	0.7 – 0.4 = 0.3	

Carry on until you have used all the cards.

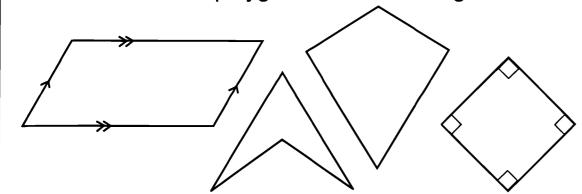
Total each player's score.

The player with the higher score wins.

Sixteen Quadrilaterals

Definition: Quadrilateral

Quadrilaterals are polygons with four straight sides.



● ●
 I. Find all 16 quadrilaterals.

(Remember none of your quadrilaterals can be congruent.)

e.g.

You can make 16 different quadrilaterals on a 9 point grid.

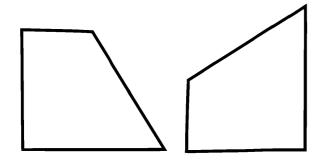


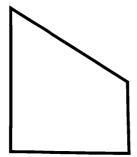
 label each quadrilateral with the correct mathematical name



Definition: Congruent

Congruent shapes have the same shape and size. e.g. These quadrilaterals are congruent.





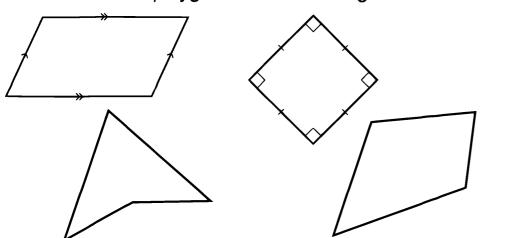
(You may like to use Smile 2163 Geometry Facts to find all the names of your quadrilaterals.)

- 2. You may like to investigate . . .
 - triangles on a 9 point grid
 - other polygons on a 9 point grid.

Sixteen Quadrilateras

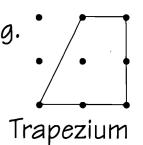
Definition: Quadrilateral

Quadrilaterals are polygons with four straight sides.



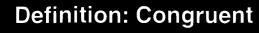
You can make 16 different quadrilaterals on a 9 point grid.

- • •
- Find all 16 quadrilaterals.
 (Remember none of your quadrilaterals can be congruent)
 - draw them
 - label each quadrilateral with the correct mathematical name

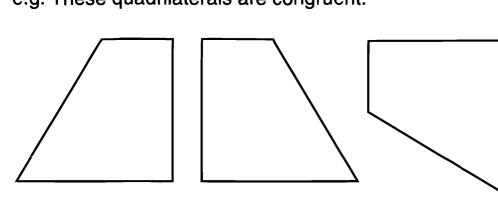


(You may like to use Smile 2163 Geometry Facts to find all the names of your quadrilaterals)

- 2. You may like to investigate ...
 - triangles on a 9 point grid
 - other polygons on a 9 point grid



Congruent shapes have the same shape and size. e.g. These quadrilaterals are congruent.

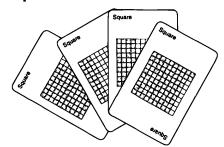


Matching decimals



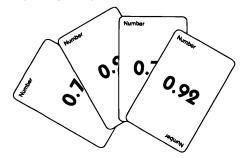
You will need the SMILE Decimal Playing Cards.

Take out the 13 cards with 'squares'.

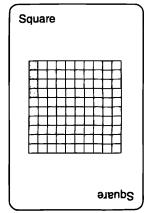


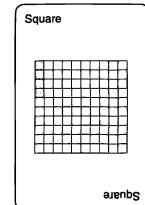
Put them in order of size smallest first.

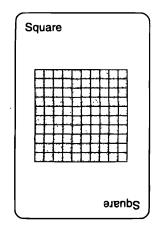
Take out the 13 cards with 'Numbers'.



Match them to the 'Squares' cards.



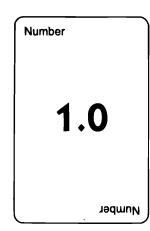




largest

smallest -

Number 0.04 Mumber



- In your book:
- Write the numbers out in order of size, smallest first.
- Which is the larger 0.8 or 0.5?
- Which is the smaller 0.72 or 0.65?

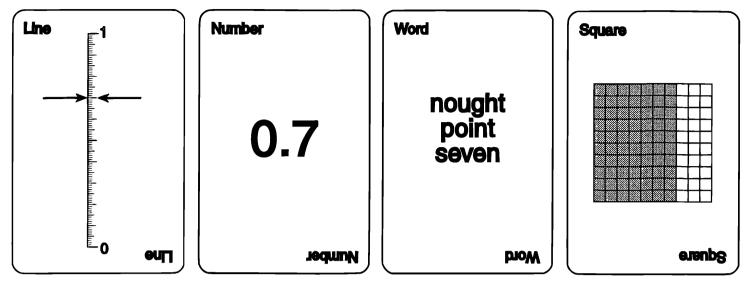
- 4. Which is the largest 0.8, 0.08 or 0.75?
- Write a number that comes between 0.5 and 0.8.
- Write a number that comes between 0.35 and 0.4.

Decimal Sort

Smile 2369

You will need the SMILE Decimal Playing Cards.

1. Find these 4 cards.



These cards show the same decimal expressed in four different ways. This is the 0.7 decimal 'set'.

- 2. Sort the remaining cards into decimal 'sets'.
- 3. Show the decimal 'sets' to your teacher.

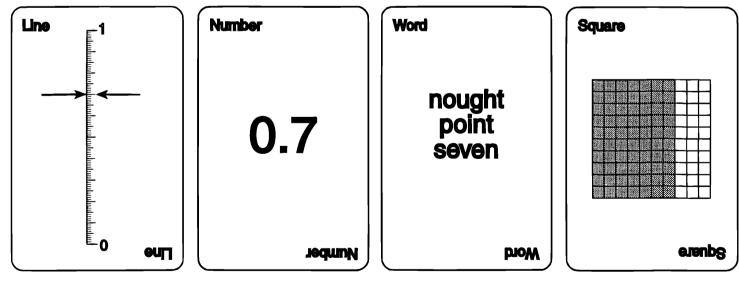
© RBKC SMILE Mathematics 2005

Decimal Sort

Smile **2369**

You will need the SMILE Decimal Playing Cards.

1. Find these 4 cards.



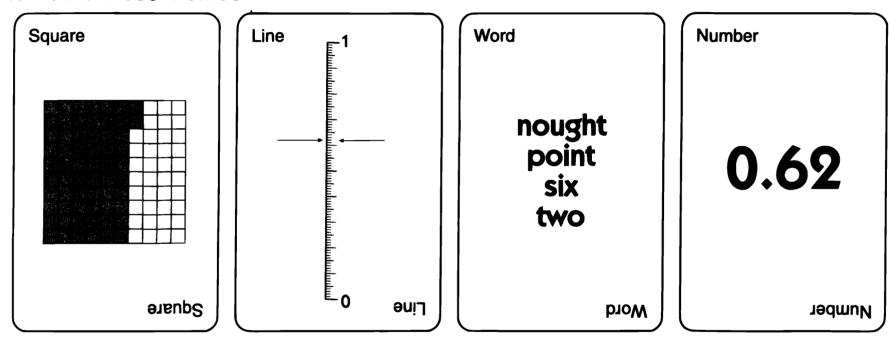
These cards show the same decimal expressed in four different ways. This is the 0.7 decimal 'set'.

- 2. Sort the remaining cards into decimal 'sets'.
- 3. Show the decimal 'sets' to your teacher.

Decimals sert

You will need the SMILE Decimal Playing Cards.

Find these 4 cards.



These cards show the same decimal expressed in four different ways. This is the 0.62 decimal 'set'.

- Sort the remaining cards into decimal 'sets'.
- 3. Show the decimal 'sets' to your teacher.

Conversion Pack 2

An activity for 2 people

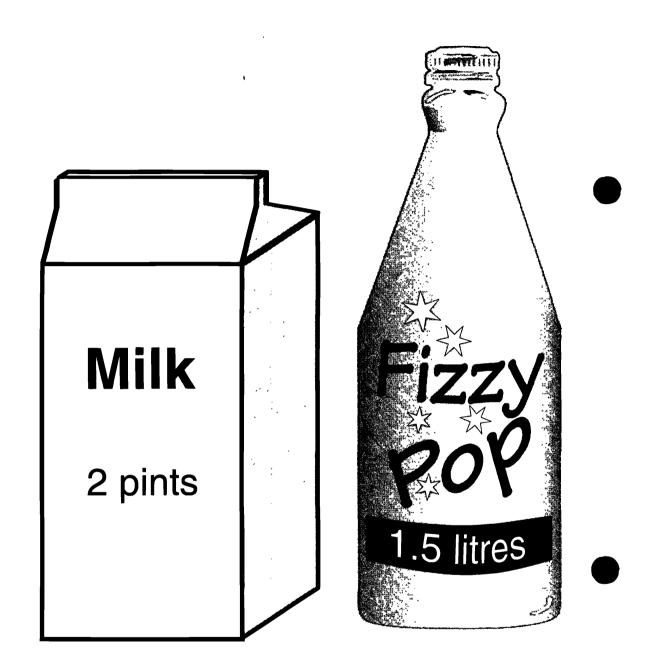
- Complete the problems on cards A F.
 You might find the conversion chart on the back of this envelope helpful.
- Record your answers in your book. Show your working. Remember to include the units in your answers.
- You need to know the conversions. Record them in your book and test each other on them.





Which is the cheaper petrol?





Which contains more liquid?



Which is longer ...

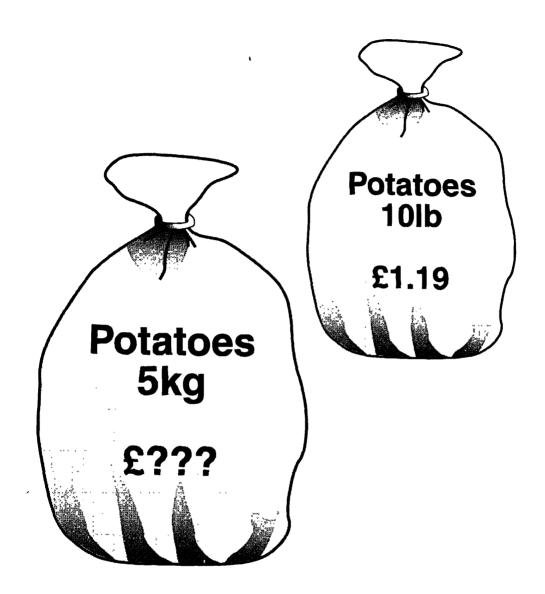
One Yard? or One Metre?





How many miles ... to Paris? to Lille?





How much should a 5kg bag of potatoes cost?



Andy is making mackerel paté

Recipé

Smoked mackerel.....6oz
Cottage cheese.....6oz
Lemon juice

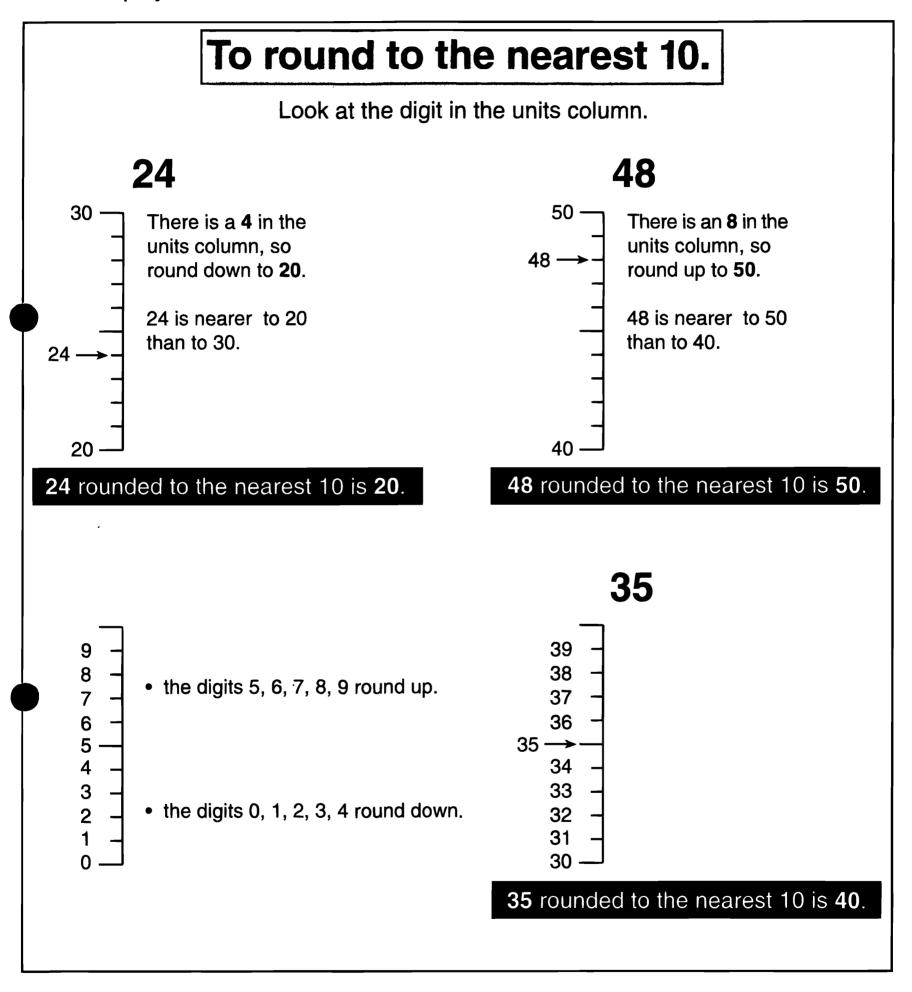


Is this enough cottage cheese?

Rounding to 10

An activity for 2 - 4 people.

You will need Smile 2226 Sum Number Cards and 20 counters of the same colour for each player.



- 1. In your book write down these numbers to the nearest 10.
 - **a**) 57
- **b)** 33
- **c)** 45
- **d)** 9

- **e)** 82
- **f)** 55
- g) 14
- **h)** 98
- 2. Turn over to play the Rounding to 10 Game.

Rounding to 10 Game

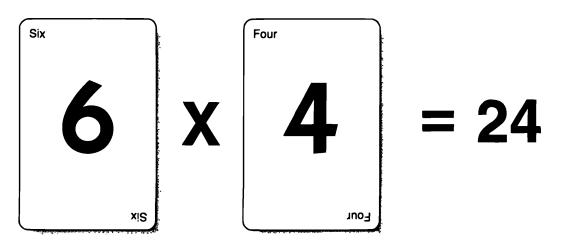
This is a game for 2 - 4 players.

Take out all the 3, 4, 5, 6, 7, 8 and 9 cards from Smile 2226 Sum Number Cards and 20 counters of the same colour for each player.

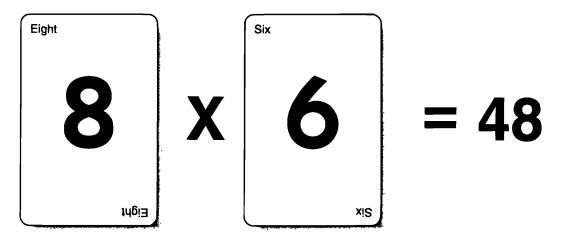
The Rules:

- Shuffle the cards.
- Place the cards face down.
- Take turns to turn over 2 cards.
- Multiply the two numbers together and round the answer to the nearest 10.
- Use a counter to cover up your rounded number on the board.
- The winner is the first player to get 3 in a line.
- Play the game several times.

Example:



24 rounded to the nearest 10 is 20. The counter can cover any 20 on the board.



48 rounded to the nearest 10 is **50**. The counter can cover any **50** on the board.

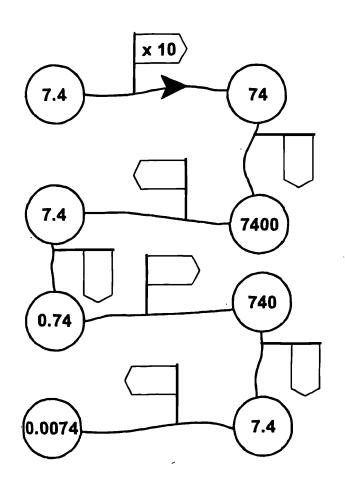
	10	30	20	10	30	40	20
	20	10	80	40	60	10	30
•	50	60	70	20	10	50	40
	10	30	10	20	30	20	10
	40	30	50	70	10	50	40
	60	20	80	40	60	50	10
•	20	10	40	20	30	10	20

Powers of Ten flags

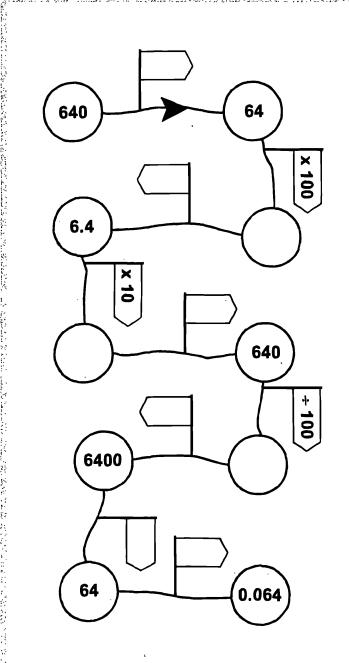
1) Fill in the flags to show which operation you need to use.

Choose from:

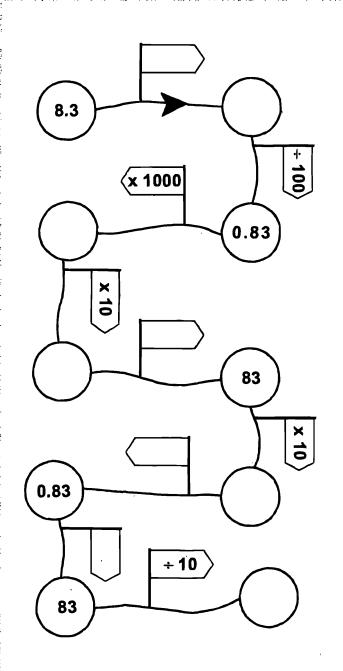




2) Fill in the flags and the circles.



3) This one is more challenging!



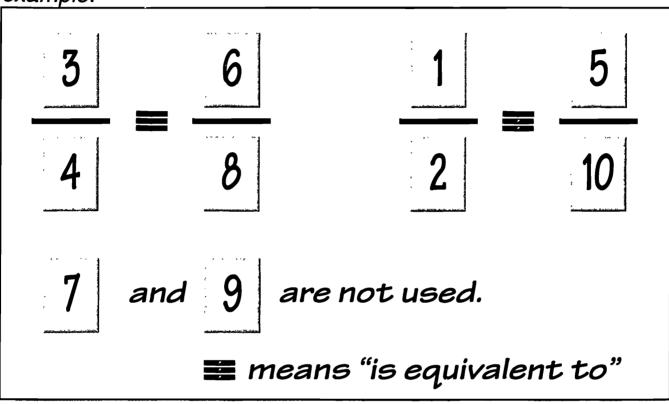
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Equivalent Fraction Pairs

1 2 3 4 5 6 7 8 9 10

The numbers above can be used to make two pairs of equivalent fractions. No number can be used more than once.

example:



- 1. a) Find another way of making two pairs of equivalent fractions using the numbers 1 to 10.
 - b) Which numbers are not used?
- 2. a) How many equivalent fraction pairs can you make using the numbers 1 to 20?

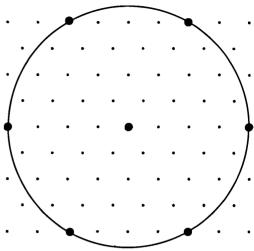
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20

Remember. No number can be used more than once.

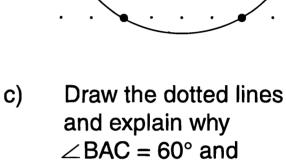
b) Which numbers are not used? Why?

Polygons in Circles
You will need 1cm dotted isometric paper and a pair of compasses.

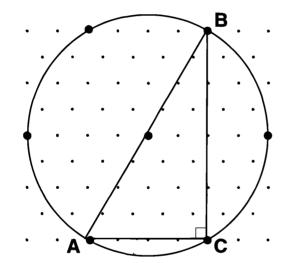
Draw a circle radius 4cm on isometric paper. 1. a) There should be 6 points on the circumference of the circle.

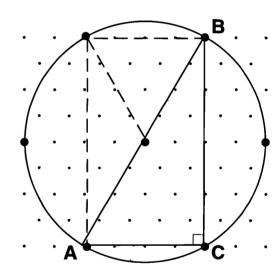


b) Using these 6 points and the centre of the circle, construct a right-angled triangle.



 \angle ABC = 30°





- 2. By drawing similar circles construct the following polygons and work out the angles in the polygons. You might like to use Smile 2163 Geometry Facts.
 - An equilateral triangle. a)
 - An isosceles triangle. b)
 - A rectangle. c)
 - A trapezium. d)
 - An arrowhead. e)
 - A rhombus. f)
 - A hexagon.
 - A pentagon. h)
- Which of your polygons are cyclic? 3.

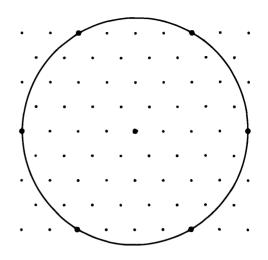
Definition of a cyclic polygon:

Any polygon whose vertices all lie on the circumference of a circle is called a cyclic polygon.

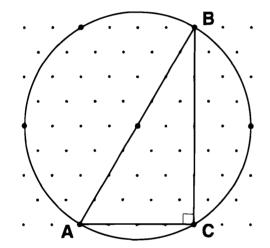
Polygons in Circles

You will need 1cm dotted isometric paper and a pair of compasses

1. a) Draw a circle of radius 4cm on isometric paper. There should be 6 points on the circumference of the circle.



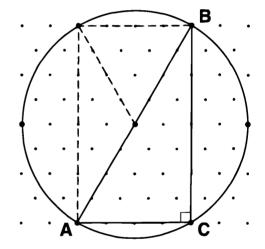
b) Using these 6 points and the centre of the circle construct a right angled triangle.



c) Draw the dotted lines and explain why

$$\angle$$
 BAC = 60° and

$$\angle$$
 ABC = 30°



- 2. By drawing similar circles construct the following polygons and work out the angles in the polygons. You might like to use Smile 2163 Geometry Facts.
 - a. An equilateral triangle.
 - b. An isosceles triangle.
 - c. A rectangle.
 - d. A trapezium.
 - e. An arrowhead.
 - f. A rhombus.
 - g. A hexagon.
 - h. A pentagon.

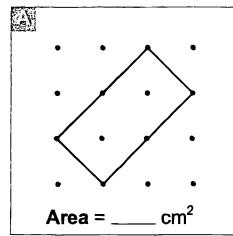
Definition of a cyclic polygon:

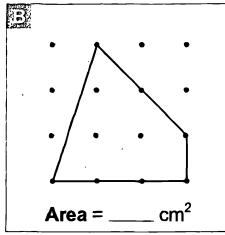
Any polygon whose vertices all lie on the circumference of a circle is called a cyclic polygon.

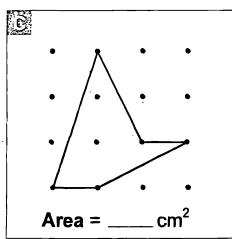
3. Which of your polygons are cyclic.

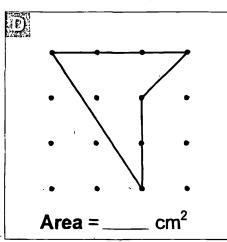
Areas of Polygons

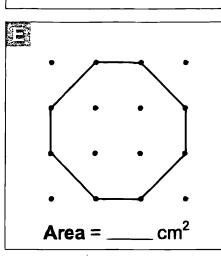
1. Calculate the areas of the polygons below.

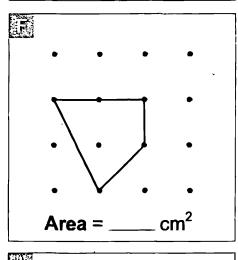


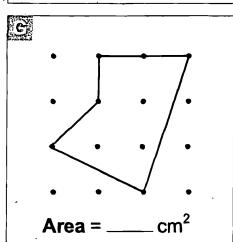


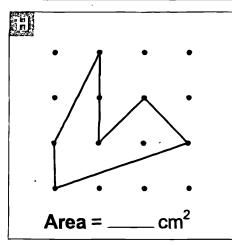


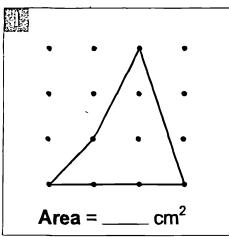






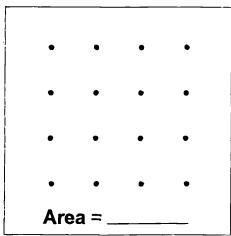


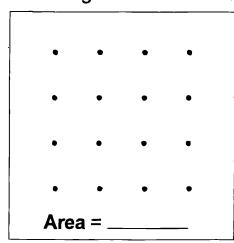


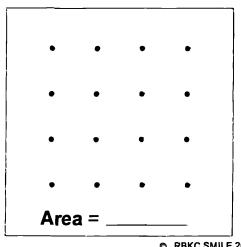


2. Sort the polygons in order of area, largest first.

3. Design 3 more polygons on the 4 x 4 grids below and find their area.

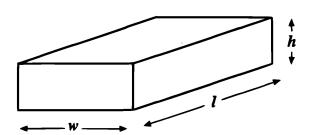






Solid Expressions

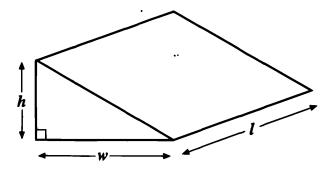
This cuboid has height h, width w and length l.



An expression for the **volume** of this cuboid is hwl. An expression for the **surface area** of this cuboid is 2(hw + hl + wl).

An expression for the **total edge length** of this cuboid is 4(h + w + l).

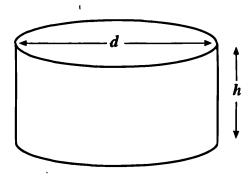
1. This right-angled triangular prism has height h, width w and length l.



Work out:

- a) An expression for the volume.
- b) An expression for the surface area.
- c) An expression for the total edge length.

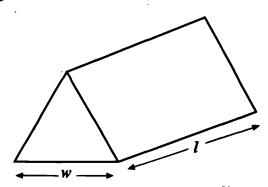
2. This cylinder has diameter d and height h.



a) Show that the surface area of the cylinder can be expressed as $\pi d^2 + \pi dh$

Work out:

- b) An expression for the volume.
- c) An expression for the total edge length.
- 3. This equilateral triangular prism has width w and length l.



a) Show that the volume of this prism can be expressed as $\sqrt{3} lw^2$

Work out:

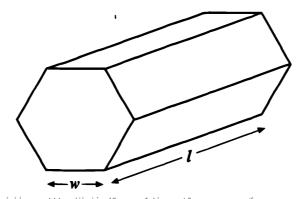
- b) An expression for the surface area.
- c) An expression for the total edge length.

4. Copy and complete this table:

	Cuboid	Right- angled triangular prism	Cylinder	Equilateral triangular prism
Diagram	A h	A N-W-L		-W-A-1-
Volume	hwl			$\frac{\sqrt{3} lw^2}{4}$
Surface area	2(hw+hl+wl)		$\frac{\pi d^2}{2} + \pi dh$	
Total edge length	4(h+w+l)			

- **5.** Look carefully at the expression for each of the solids. How would you decide if an expression described:
 - a) volume?
 - b) surface area?
 - c) total edge length?

6. The regular hexagonal prism below has the dimensions shown.



The three expressions for the hexagonal prism are:

$$6lw + 3\sqrt{3}w^2$$

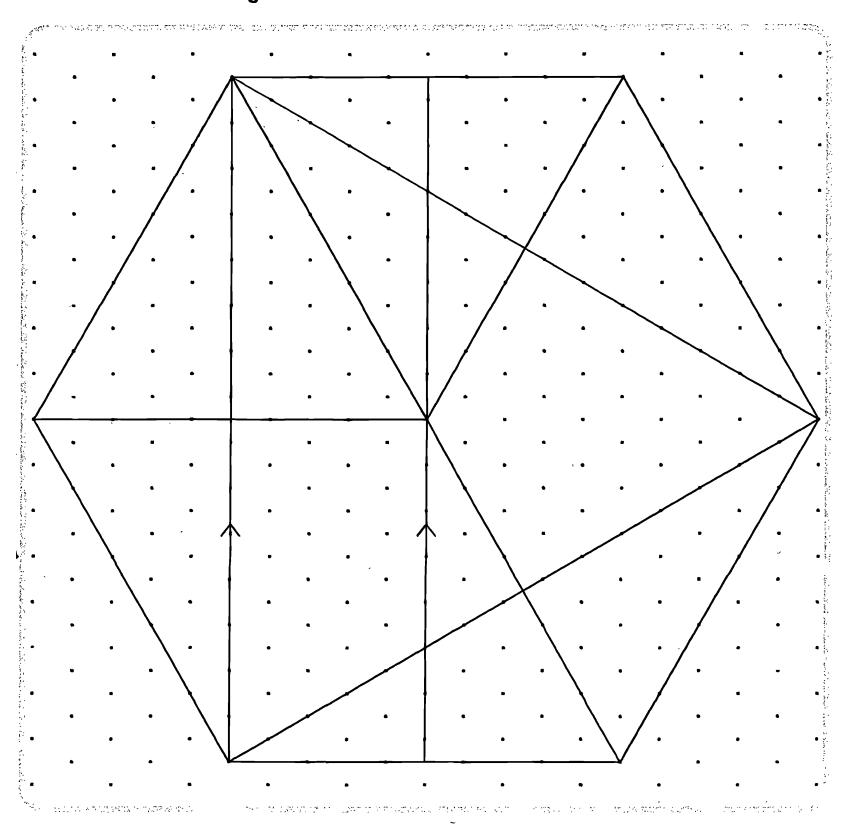
$$12w + 6l$$

$$\frac{3\sqrt{3} lw^2}{2}$$

- a) Which of the three expressions describes the volume of the regular hexagonal prism?
- b) Which of the three expressions describes the surface area of the regular hexagonal prism?
- c) Which of the three expressions describes the total edge length of the regular hexagonal prism?

Angles in a Regular Hexagon

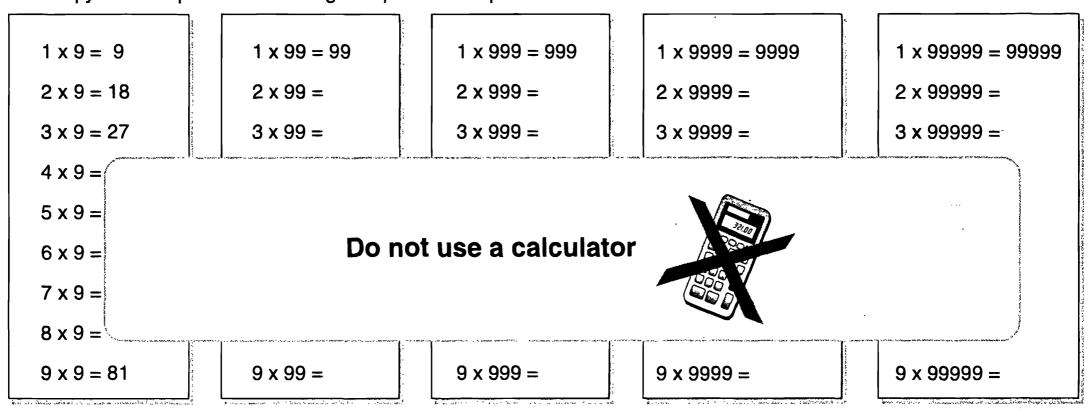
The regular hexagon below is drawn on isometric dotted paper. Find all the unmarked angles.



Smile **2385**

Nine Nine Nine

1. Copy and complete the following multiplication sequences.



- 2. Write about your methods. How did you work out the sequences?
- **3.** Do your methods still work for:

$$10 \times 9 =$$
 $10 \times 99 =$
 $10 \times 999 =$
 $11 \times 9 =$
 $11 \times 999 =$
 $11 \times 999 =$
 $12 \times 99 =$
 $12 \times 999 =$
 $12 \times 999 =$
 $13 \times 99 =$
 $13 \times 999 =$

MultiplicationReview

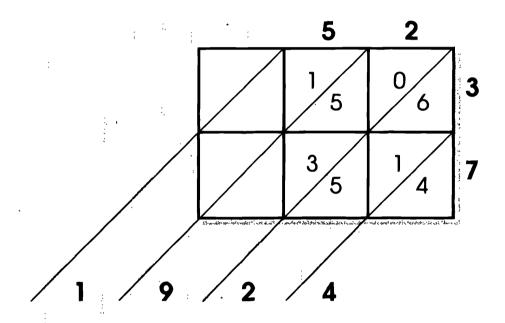
An activity for 2 or more people

In this pack there are five methods of multiplication.

For each one:

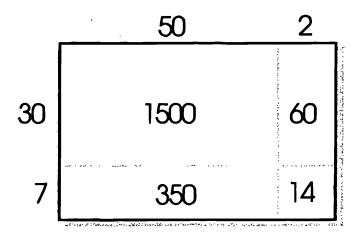
- 1. Look at the method of multiplication.
- 2. Describe what was done.
- 3. Check that the method works by trying it out on 27 x 69.
- 4. Try to work out why the method works.





- 1. Look at this method of multiplication.
- 2. Describe what was done.
- 3. Check that this method works by trying it out on 27 x 69.
- 4. Try to work out why the method works.





$$1500 + 350 + 60 + 14 = 1924$$

- 1. Look at this method of multiplication.
- 2. Describe what was done.
- 3. Check that this method works by trying it out on 27 x 69.
- Try to work out why the method works.

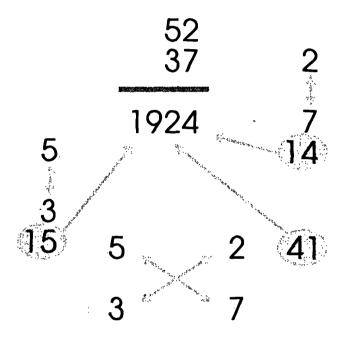


52 X 37 = 1924

- 1. Look at this method of multiplication.
- 2. Describe what was done.
- 3. Check that this method works by trying it out on 27 x 69.
- **4.** Try to work out why the method works.

D

$52 \times 37 = ?$



- 1. Look at this method of multiplication.
- 2. Describe what was done.
- 3. Check that this method works by trying it out on 27 x 69.
- Try to work out why the method works.



52	37
26	74
13	148
4	
3	592
1.	1184
6	296 592

TOTAL TO CARRO SERVICE AND SERVICE SERVICES SERV

1924

- 1. Look at this method of multiplication.
- 2. Describe what was done.
- 3. Check that this method works by trying it out on 27 x 69.
- **4.** Try to work out why the method works.

Multiples of Ten

The **multiples** of a number are the numbers that appear in its multiplication table.

Example:

The multiples of 10 are 10, 20, 30, 40, ...

1. This number square contains pairs of numbers next to each other whose sum is a multiple of 10.

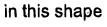
1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36

Example:

$$12 + 18 = 30$$

Find and mark five other pairs of numbers whose sum is a multiple of 10.

2. On this grid mark the three groups of numbers



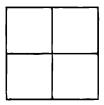
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whose sum is a multiple of 10.

1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36

3. On this grid mark the five groups of numbers

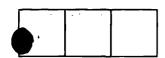
in this shape



whose sum is a multiple of 10.

1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36

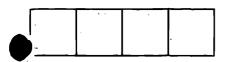
4. On this grid mark the two groups of numbers in this shape



whose sum is a multiple of 10.

1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36

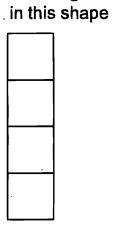
5. On this grid mark the four groups of numbers in this shape



whose sum is a multiple of 10.

1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36

6. On this grid mark the four groups of numbers



whose sum is a multiple of 10.

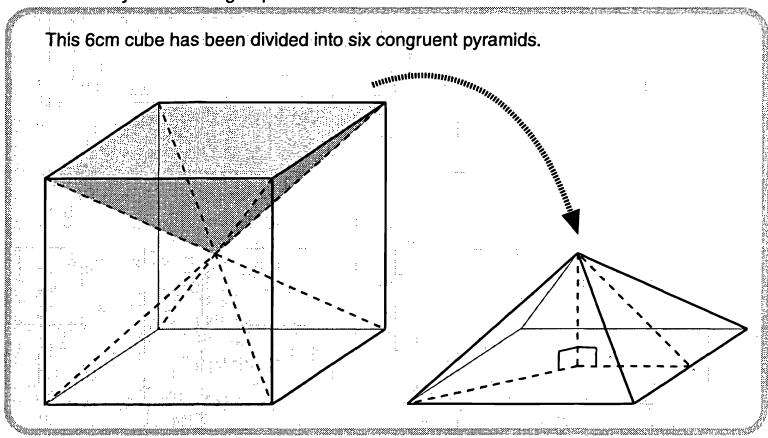
1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36

7. What other groups of numbers can you find whose sum is a multiple of 10? Mark them on the grid below.

1	2.	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36

Six Pyramids

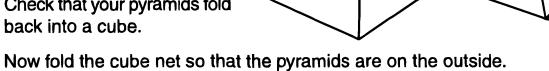
An activity for a small group.





... and use these dimensions to make six pyramids. Stick them onto the net of a 6cm cube.

Check that your pyramids fold back into a cube.



Solve the problems below for your new solid.

For each problem assume there are no hollow spaces inside the solid.

What is the volume of the new solid?

Has the new solid got 12 faces or 24? Justify your answer.

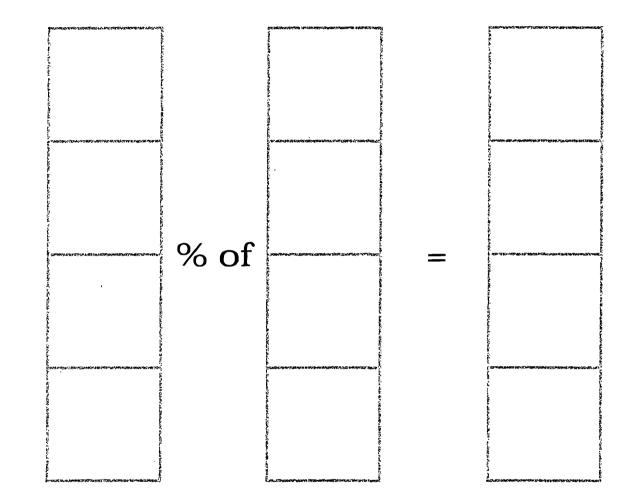
What is the surface area of the new solid?

Can you draw a net for the new solid using ruler and compasses only?

Percentage Puzzle

You will need: scissors, glue

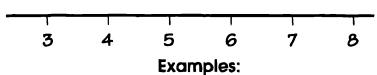
- Cut out the numbers at the bottom of this sheet.
- Place them on the sheet to make four true statements.
- Do not stick them down until you are sure that all four statements are true.



fo		,		r	,	 -
	10	15	20	25	35	45
1	50	65	70	75	80	150

Consecutive Products

Consecutive numbers lie next to each other on the number line.



6 and 7 are consecutive.5, 6 and 7 are consecutive.4 and 6 are **not** consecutive.

The **product** of two numbers is found by multiplying them together.

Example:

The product of 6 and 12 is 72 because $6 \times 12 = 72$

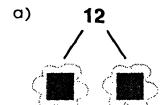
Example:

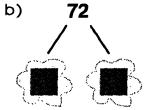
42 is the product of two consecutive numbers.

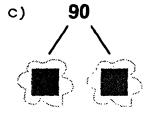
 $6 \times 7 = 42$

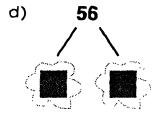


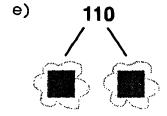
1. Copy the following and find the two missing consecutive numbers.

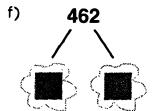


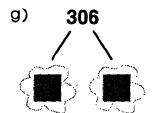


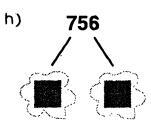


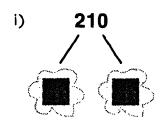


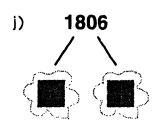


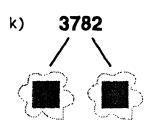


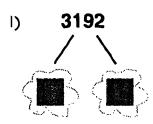




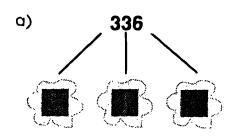


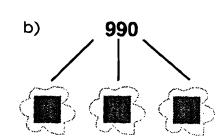


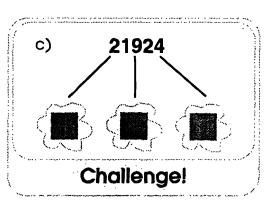




2. Copy the following and find the three missing consecutive numbers.



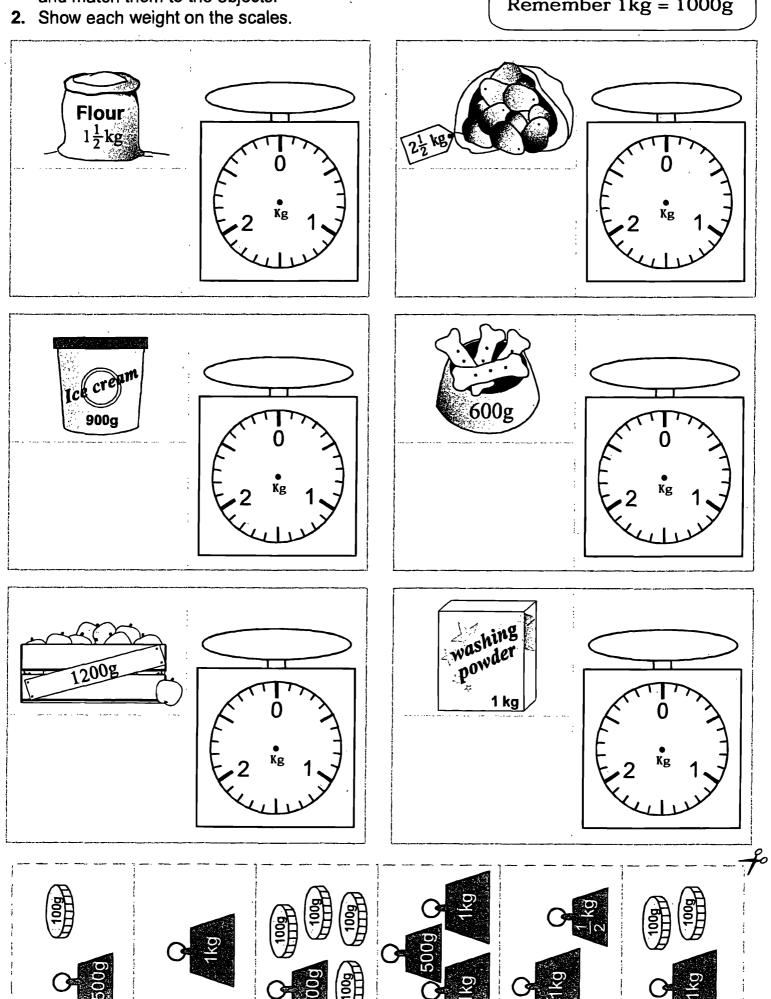




Matching Weights You will need: glue, scissors

1. Cut out the weights at the bottom of this worksheet and match them to the objects.

Remember 1 kg = 1000 g



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Sensible Answers

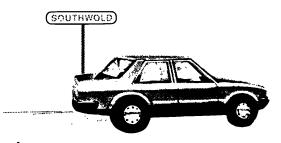
Do not use a calculator.



Problem:

18 people are going to Southwold by car. Four people can fit in each car.

How many cars are needed?



Method:

 $18 \div 4 = 4.5$

The answer to 18 divided by 4 is between 4 and 5. If you gave the answer 4 only 16 people could go. 2 people would be left behind.

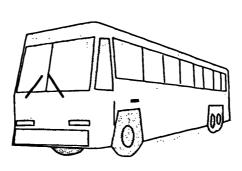
So the sensible answer is 5 cars.

The sensible answer depends upon the original problem.

Solve the problems below. For each problem, show your method and make sure that your answer is sensible.

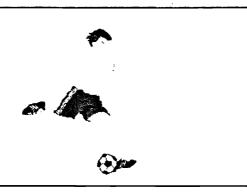
1. 169 students are going on a school trip to Margate. Each coach can carry 50 students.

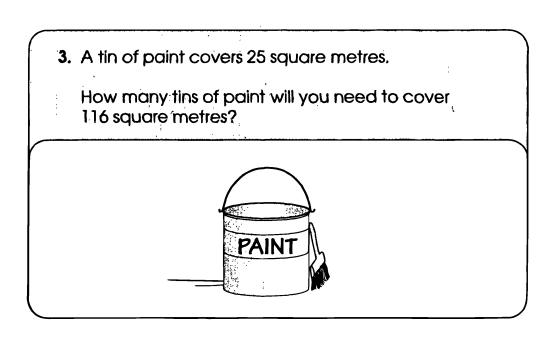
How many coaches will be needed?



2. A football club has 49 members. A football team needs 11 players.

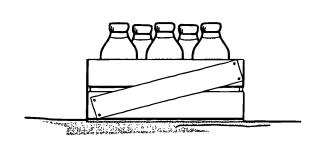
How many teams can the football club field?





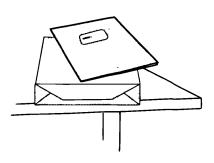
Milk is sold in crates of 12 identical bottles.
 A wholesaler has 102 identical bottles.

How many crates can she make up?



5. Exercise books are sold in packets of 10. Ms Kershaw wants to order exercise books for 67 students.

How many packets of books does Ms Kershaw need to order?



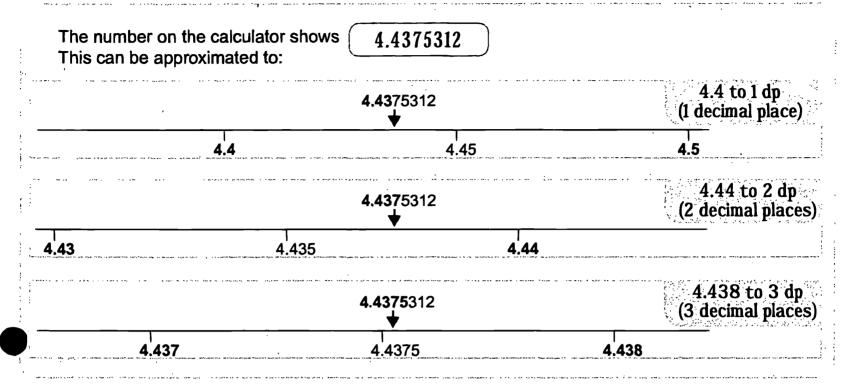
6. Jameela wants to record her favourite television programme.

Each episode lasts 40 minutes.

How many episodes can she record on a 3 hour tape.

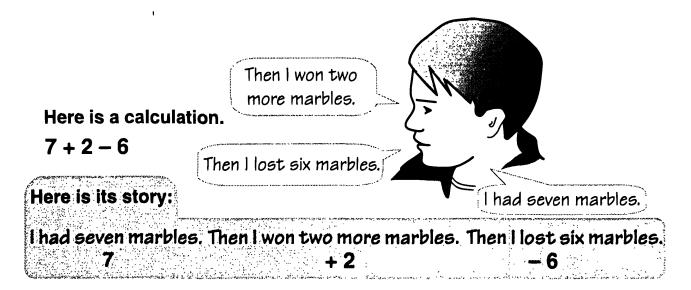


Decimal Places Match



Match each calculator a	answer to its three appro	ximations.	,
Number on calculator 3.4457982	Number to 2 decimal places 3.45 to 2 dp	Number to 1 decimal place 3.6 to 1 dp	Number to 3 decimal places 3.456 to 3 dp
Number to 1 decimal place 3.5 to 1 dp	Number to 3 decimal places 3.557 to 3 dp	Number on calculator 3.5471035	Number to 2 decimal places 3.47 to 2 dp
Number to 2 decimal places 3.46 to 2 dp	Number on calculator 3.4561207	Number to 3 decimal places 3.547 to 3 dp	Number to 1 decimal place 3.4 to 1 dp
Number to 1 decimal place 3.5 to 1 dp	Number to 3 decimal places	Number on calculator 3.5568156	Number to 2 decimal places 3.56 to 2 dp
Number to 1 decimal place 3.5 to 1 dp	Number to 3 decimal places 3.467 to 3 dp	Number to 2 decimal places 3.55 to 2 dp	Number on calculator 3.4672331

Number Stories

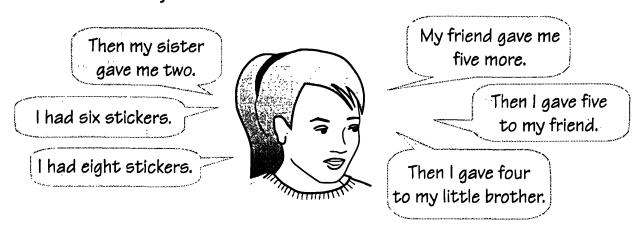


1. Here are two other calculations.

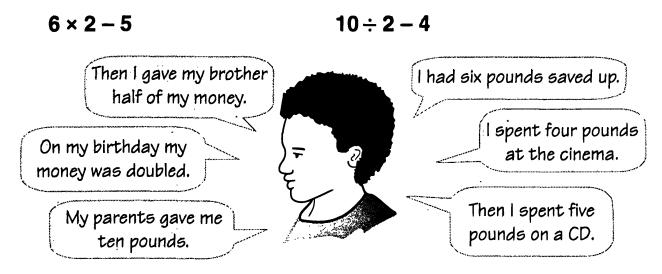
$$8 - 5 + 2$$

$$6 + 5 - 4$$

Use the sentences below to make a number story for each calculation. Write them down in your book.



2. Here are two more calculations. Use the sentences below to make a number story for each calculation. Write them down in your book.



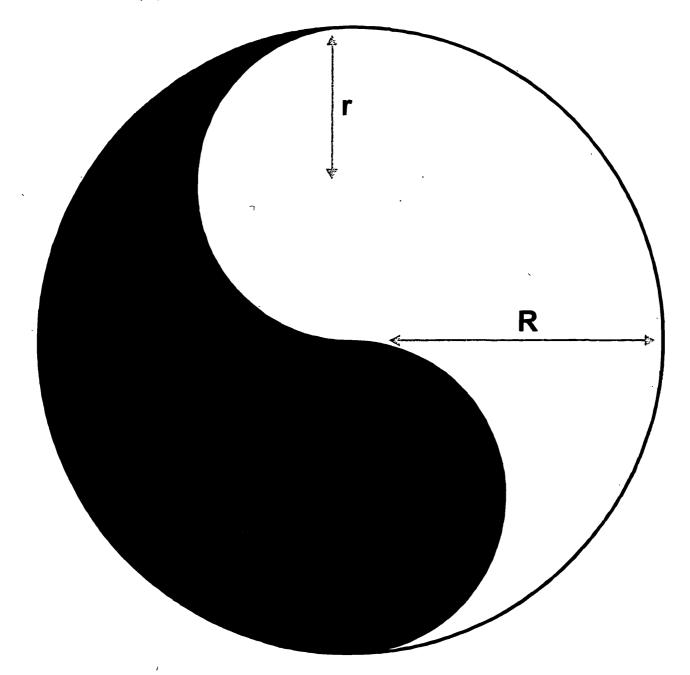
3. Make up number stories for each of these calculations and show them to your teacher.

$$8 - 3 + 7$$

$$4 \times 3 + 6$$

Circle Cut

In the diagram below, the radius of each small semicircle (r) is half the radius of the outer circle (R).



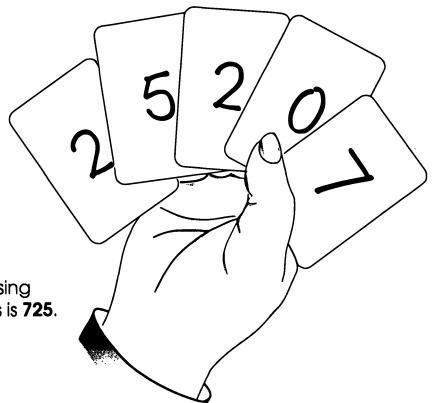
Make one straight cut across the circle so that each of the two regions is exactly halved.

Use algebra to justify your answer.

Play Your Cards Right

A game for four players in two teams.

You will need a set of number cards (digits between 0 and 9) and the targets from worksheet 2401a.



Target!

Largest odd number

The largest odd number using three of the number cards is **725**.

The Rules

Shuffle the number cards.

Deal each team five number cards.

Place the targets face down in a pile.

Turn over the first target.

Use any three of the number cards to get as close to the target as possible.

The team who gets the closest scores one point.

Place the used number cards at the bottom of the pack and replace them with three new cards.

Turn over the next target and repeat the game.

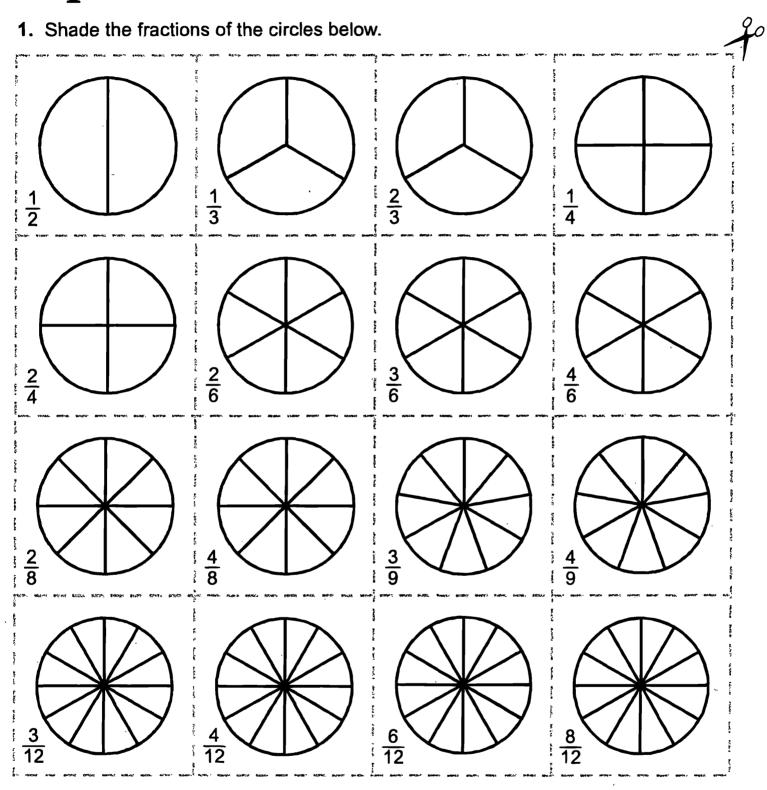
The team with the highest score wins.

Targets for

Play Your Cards Right

Target! Nearest even number to 500	Target! Nearest number to 100
Target! Largest odd number	Target! Largest even number
Target! Nearest odd number to 400	Target! Nearest number to 250
Target! Nearest number to 723	Target! Nearest number to 1000
Target! Smallest odd number	Target! Smallest even number
Target! Largest number	Target! Smallest number

Equivalent Fractions Sort



- 2. Cut out all the fractions and arrange them in order of size.
- 3. Which of the fractions are equivalent? (equivalent fractions represent the same proportion).
- 4. Find 2 fractions which are equivalent to $\frac{3}{4}$.

Missing the Point



Example:

Sheila saw this addition and realised that one of the numbers being added had a decimal point either missing or in the wrong place.

$$53.7 + 1.26 = 66.3$$
 ×

She rewrote the addition correctly.

Do not use a calculator.

In each of the calculations below, one and only one of the decimal points is either missing or in the wrong place.

A Rewrite these additions to make them correct.

1.
$$40.5 + 24.05 = 28.1$$

3.
$$7 + 4 = 4.7$$

4.
$$7.77 + 7.07 = 84.77$$

5.
$$4.5 + 0.55 = 1$$

6.
$$0.003 + 7 = 7.3$$

B Rewrite these subtractions to make them correct.

1.
$$45 - 1.95 = 2.55$$

2.
$$6.05 - 3.12 = 57.38$$

3.
$$4.9 - 4.9 = 44.1$$

4.
$$5 - 0.01 = 0.49$$

6.
$$6 - 3.12 = 56.88$$



Commercial References

0001 - 2403 in numerical order

List of abbreviations on 2001 SMILE Network

ANGLE SMILE software 'Angle Estimation' available from SMILE Mathematics

COORD SMILE software 'Co-ordinates' available from SMILE Mathematics

DfEE SMILE software Ref: 0260/2000 available from DfEE

DIME A variety of materials available from Tarquin

ENRICH

SMILE software 'Co-ordinates' available from SMILE Mathematics

SMILE software 'Graphing' available from SMILE Mathematics

INVEST

SMILE software 'Investigation' available from SMILE Mathematics

INVEST Paxx

Page number from Student's Handbook 'Investigation' available from

SMILE Mathematics

MA Poster Poster available from Mathematics Association

MATH PUZ SMILE software 'Mathematical Puzzles' available from SMILE Mathematics

MOVE SMILE software 'Movement' available from **SMILE Mathematics**

MOVE Pgxx Page number from Student's Handbook 'Movement' to be printed from the

CD available from SMILE Mathematics

NUM CD 'Numeracy' available from SMILE Mathematics

PROP/NO CD 'Properties of Number' available from **SMILE Mathematics**

PROP/NO Pgxx Page number from Student's Handbook 'Properties of Number' to be

printed from the CD available from SMILE Mathematics

SENSE/NO SMILE software 'Sense of Number' available from **SMILE Mathematics** SENSE/NO PgxxPage number from Student's Handbook 'Sense of Number' to be printed

from the CD available from SMILE Mathematics

TARQUIN Poster Poster available from Tarquin

List of Commercial Referenced activities in SMILE number order.

0581	Using a Mirror (DIME - Reflection Activities PP)	1340	Pattern and Notation (DIME - Pre-Algebra)
0778	Tangram Tree (MA Poster)	1341	Number Machines (DIME - Pre-Algebra PP)
0906	Tak Tiles A (DIME - TakTiles PP3)	1342	Mappings and Graphs (DIME - Pre-Algebra)
0907	Tak Tiles B (DIME - TakTiles PP3)	1343	Simple Mappings (DIME - Pre-Algebra PP)
0908	Tak Tiles C (DIME - TakTiles PP3)	1344	Further Mappings (DIME - Pre-Algebra PP)
0909	Tak Tiles D (DIME - TakTiles PP3)	1354	Euler Solids (MA Poster)
1331	Equal Angles (DIME - The Rotagram PP)	1482	Tricky Sum (MA Poster)
1332	Potations (DIME - The Rotagram PP)	1604	Nim (SMILE software Mathematical Puzzles)
1333	Directions (DIME - The Rotagram PP)	1605	Guess (SMILE software Sense of Number)
1334	Recognising Solids (DIME - 3-D Sketching PP)	1606	GuessD (SMILE software Sense of Number)
1335	Sketching Solids (DIME - 3-D Sketching PP)	1607	Elephant (SMILE software Co-ordinates)
1336	Turning and Toppling (DIME - 3-D Sketching)	1608	Reverse (SMILE software Mathematical Puzzles)
1337	Reflections (DIME - 3-D Sketching PP)	1609	Maze (SMILE software Movement)
1338	Wedges (DIME - 3-D Sketching PP)	1620	Bounce (DIEE)
1339	Flags (DIME - Pre-Algebra PP)	1621	Rhino (SMILE software Co-ordinates)

1622	Vectmeet (SMILE software Movement)	1796	Plotter (SMILE software Graphing)
1624	Snooker (SMILE software Angle Estimation)	1798	Quilts (SMILE software Investigations)
1625	Box (SMILE software Sense of Number)	1820	Parallels (SMILE software Graphing)
1626	Boat (SMILE software Mathematical Puzzles)	1833	Magic (SMILE software Numeracy)
1641	Lines (SMILE software Co-ordinates)	1834	Tenners (SMILE software Numeracy)
1650	Take Part (Software - DIEE)	1835	Magnify (SMILE software Sense of Number)
1651	Frog (SMILE software Mathematical Puzzles)	1836	3inaline (SMILE software Co-ordinates)
1652	Jugs (SMILE software Mathematical Puzzles)	1840	PointsAndLines (SMILE software Graphing)
1653	Master(SMILE software Mathematical Puzzles)	1841	Interlocking Squares (DIME - Shape
1654	Racegame (SMILE software Movement)		Recognition PP1)
1666	Tower (SMILE software Sense of Number)	1842	Shapes Jigsaw (DIME - Shape
1667	Pilot (SMILE software Movement)		Recognition PP2)
1691	Predict (SMILE software Mathematical Puzzles)	1851	Regions (SMILE software Graphing)
1702	Circle (SMILE software Investigations)	1852	Foxes and Chickens (SMILE software Graphing)
1708	Factor (SMILE software Properties of Number)	1853	Pinball (SMILE software Investigations)
1714	Queens (SMILE Properties of Number Students'	1855	Quadratic Mappings (DIME - Pre-Algebra PP)
	HB Pg 35)	1866	Mirror Match (DIME - Reflection Activities PP)
1715	Locate (SMILE software Co-ordinates)	1876	Fill the Shape (DIME - Build-up PP)
1718	Line Symmetry A 1 - 4 (DIME - Line	1877	Add a Cube or Two (DIME - Build-up PP)
	Symmetry Puzzles A PP5A)	1878	Two Blocks (DIME - Build-up PP)
1719	Line Symmetry A 5 - 10 (DIME - Line	1879	Build and Balance (DIME - Build-up PP)
	•		
	Symmetry Puzzles A PP5A)	1880	More than Two Blocks (DIME - Build-up PP)
	•		More than Two Blocks (DIME - Build-up PP) Wedges 1 (DIME - Build-up PP)
1721	Symmetry Puzzles A PP5A)	1882	
1721 1728	Symmetry Puzzles A PP5A) Angle 90° (SMILE software Angle Estimation)	1882 1883	Wedges 1 (DIME - Build-up PP) Wedges 2 (DIME - Build-up PP) Regular Tilings 1 (DIME - Regular Tilings
1721 1728 1729	Symmetry Puzzles A PP5A) Angle 90° (SMILE software Angle Estimation) BoxD (SMILE software Sense of Number)	1882 1883	Wedges 1 (DIME - Build-up PP) Wedges 2 (DIME - Build-up PP) Regular Tilings 1 (DIME - Regular Tilings Project)
1721 1728 1729 1730	Symmetry Puzzles A PP5A) Angle 90° (SMILE software Angle Estimation) BoxD (SMILE software Sense of Number) Minimax (SMILE software Sense of Number)	1882 1883	Wedges 1 (DIME - Build-up PP) Wedges 2 (DIME - Build-up PP) Regular Tilings 1 (DIME - Regular Tilings Project) • Use A Triangles, B Convex Quadrilaterals, C Concave Quadrilaterals, E 2 Sizes of Squares.
1721 1728 1729 1730 1731	Symmetry Puzzles A PP5A) Angle 90° (SMILE software Angle Estimation) BoxD (SMILE software Sense of Number) Minimax (SMILE software Sense of Number) Wall (SMILE software Sense of Number)	1882 1883 1889	Wedges 1 (DIME - Build-up PP) Wedges 2 (DIME - Build-up PP) Regular Tilings 1 (DIME - Regular Tilings Project) • Use A Triangles, B Convex Quadrilaterals, C Concave Quadrilaterals, E 2 Sizes of Squares. • For each activity do questions 1 - 3.
1721 1728 1729 1730 1731 1732	Symmetry Puzzles A PP5A) Angle 90° (SMILE software Angle Estimation) BoxD (SMILE software Sense of Number) Minimax (SMILE software Sense of Number) Wall (SMILE software Sense of Number) Rose (SMILE software Investigations)	1882 1883 1889	Wedges 1 (DIME - Build-up PP) Wedges 2 (DIME - Build-up PP) Regular Tilings 1 (DIME - Regular Tilings Project) • Use A Triangles, B Convex Quadrilaterals, C Concave Quadrilaterals, E 2 Sizes of Squares. • For each activity do questions 1 - 3. Regular Tilings 2 (DIME - Regular Tilings
1721 1728 1729 1730 1731 1732 1745	Symmetry Puzzles A PP5A) Angle 90° (SMILE software Angle Estimation) BoxD (SMILE software Sense of Number) Minimax (SMILE software Sense of Number) Wall (SMILE software Sense of Number) Rose (SMILE software Investigations) 3D Maze (SMILE software Movement)	1882 1883 1889	Wedges 1 (DIME - Build-up PP) Wedges 2 (DIME - Build-up PP) Regular Tilings 1 (DIME - Regular Tilings Project) • Use A Triangles, B Convex Quadrilaterals, C Concave Quadrilaterals, E 2 Sizes of Squares. • For each activity do questions 1 - 3.
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1721 1728 1729 1730 1731 1732 1745 1746	Symmetry Puzzles A PP5A) Angle 90° (SMILE software Angle Estimation) BoxD (SMILE software Sense of Number) Minimax (SMILE software Sense of Number) Wall (SMILE software Sense of Number) Rose (SMILE software Investigations) 3D Maze (SMILE software Movement) Identify (SMILE software Properties of Number) Define (SMILE software Properties of Number)	1882 1883 1889	Wedges 1 (DIME - Build-up PP) Wedges 2 (DIME - Build-up PP) Regular Tilings 1 (DIME - Regular Tilings Project) Use A Triangles, B Convex Quadrilaterals, C Concave Quadrilaterals, E 2 Sizes of Squares. For each activity do questions 1 - 3. Regular Tilings 2 (DIME - Regular Tilings Project) Use F Polygons.
1721 1728 1729 1730 1731 1732 1745 1746 1747	Symmetry Puzzles A PP5A) Angle 90° (SMILE software Angle Estimation) BoxD (SMILE software Sense of Number) Minimax (SMILE software Sense of Number) Wall (SMILE software Sense of Number) Rose (SMILE software Investigations) 3D Maze (SMILE software Movement) Identify (SMILE software Properties of Number) Define (SMILE software Properties of Number) Darts (SMILE software Numeracy)	1882 1883 1889	Wedges 1 (DIME - Build-up PP) Wedges 2 (DIME - Build-up PP) Regular Tilings 1 (DIME - Regular Tilings Project) Use A Triangles, B Convex Quadrilaterals, C Concave Quadrilaterals, E 2 Sizes of Squares. For each activity do questions 1 - 3. Regular Tilings 2 (DIME - Regular Tilings Project) Use F Polygons. Do questions 1 - 4. Regular Tilings 3 (DIME- Regular Tilings Project)
1721 1728 1729 1730 1731 1732 1745 1746 1747 1755	Angle 90° (SMILE software Angle Estimation) BoxD (SMILE software Sense of Number) Minimax (SMILE software Sense of Number) Wall (SMILE software Sense of Number) Rose (SMILE software Investigations) 3D Maze (SMILE software Movement) Identify (SMILE software Properties of Number) Define (SMILE software Properties of Number) Darts (SMILE software Numeracy) Hopslide (SMILE software Mathematical Puzzles)	1882 1883 1889	Wedges 1 (DIME - Build-up PP) Wedges 2 (DIME - Build-up PP) Regular Tilings 1 (DIME - Regular Tilings Project) • Use A Triangles, B Convex Quadrilaterals, C Concave Quadrilaterals, E 2 Sizes of Squares. • For each activity do questions 1 - 3. Regular Tilings 2 (DIME - Regular Tilings Project) • Use F Polygons. • Do questions 1 - 4. Regular Tilings 3 (DIME- Regular Tilings
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1721 1728 1729 1730 1731 1732 1745 1746 1747 1755 1756 1767	Angle 90° (SMILE software Angle Estimation) BoxD (SMILE software Sense of Number) Minimax (SMILE software Sense of Number) Wall (SMILE software Sense of Number) Rose (SMILE software Investigations) 3D Maze (SMILE software Movement) Identify (SMILE software Properties of Number) Define (SMILE software Properties of Number) Darts (SMILE software Numeracy) Hopslide (SMILE software Mathematical Puzzles) Tadpoles (SMILE software Mathematical Puzzles) AddsUpTo (SMILE software Numeracy)	1882 1883 1889 1890	Wedges 1 (DIME - Build-up PP) Wedges 2 (DIME - Build-up PP) Regular Tilings 1 (DIME - Regular Tilings Project) • Use A Triangles, B Convex Quadrilaterals, C Concave Quadrilaterals, E 2 Sizes of Squares. • For each activity do questions 1 - 3. Regular Tilings 2 (DIME - Regular Tilings Project) • Use F Polygons. • Do questions 1 - 4. Regular Tilings 3 (DIME- Regular Tilings Project) • Use D Pentagons. • Do questions 1 - 3. Line Symmetry B 1 - 3 (DIME- Line
1721 1728 1729 1730 1731 1732 1745 1746 1747 1755 1756 1767	Angle 90° (SMILE software Angle Estimation) BoxD (SMILE software Sense of Number) Minimax (SMILE software Sense of Number) Wall (SMILE software Sense of Number) Rose (SMILE software Investigations) 3D Maze (SMILE software Movement) Identify (SMILE software Properties of Number) Define (SMILE software Properties of Number) Darts (SMILE software Numeracy) Hopslide (SMILE software Mathematical Puzzles) Tadpoles (SMILE software Mathematical Puzzles) AddsUpTo (SMILE software Numeracy) Spirals (SMILE software Investigations)	1882 1883 1889 1890 1891	Wedges 1 (DIME - Build-up PP) Wedges 2 (DIME - Build-up PP) Regular Tilings 1 (DIME - Regular Tilings Project) Use A Triangles, B Convex Quadrilaterals, C Concave Quadrilaterals, E 2 Sizes of Squares. For each activity do questions 1 - 3. Regular Tilings 2 (DIME - Regular Tilings Project) Use F Polygons. Do questions 1 - 4. Regular Tilings 3 (DIME- Regular Tilings Project) Use D Pentagons. Do questions 1 - 3. Line Symmetry B 1 - 3 (DIME- Line Symmetry Puzzles B PP5B)
1721 1728 1729 1730 1731 1732 1745 1746 1747 1755 1767 1776	Angle 90° (SMILE software Angle Estimation) BoxD (SMILE software Sense of Number) Minimax (SMILE software Sense of Number) Wall (SMILE software Sense of Number) Rose (SMILE software Investigations) 3D Maze (SMILE software Movement) Identify (SMILE software Properties of Number) Define (SMILE software Properties of Number) Darts (SMILE software Numeracy) Hopslide (SMILE software Mathematical Puzzles) Tadpoles (SMILE software Mathematical Puzzles) AddsUpTo (SMILE software Numeracy) Spirals (SMILE software Investigations) Avoid each other (SMILE Investigations	1882 1883 1889 1890 1891	Wedges 1 (DIME - Build-up PP) Wedges 2 (DIME - Build-up PP) Regular Tilings 1 (DIME - Regular Tilings Project) • Use A Triangles, B Convex Quadrilaterals, C Concave Quadrilaterals, E 2 Sizes of Squares. • For each activity do questions 1 - 3. Regular Tilings 2 (DIME - Regular Tilings Project) • Use F Polygons. • Do questions 1 - 4. Regular Tilings 3 (DIME- Regular Tilings Project) • Use D Pentagons. • Do questions 1 - 3. Line Symmetry B 1 - 3 (DIME- Line Symmetry Puzzles B PP5B) Line Symmetry B 4 - 6 (DIME- Line
1721 1728 1729 1730 1731 1732 1745 1746 1747 1756 1767 1776	Angle 90° (SMILE software Angle Estimation) BoxD (SMILE software Sense of Number) Minimax (SMILE software Sense of Number) Wall (SMILE software Sense of Number) Rose (SMILE software Investigations) 3D Maze (SMILE software Movement) Identify (SMILE software Properties of Number) Define (SMILE software Properties of Number) Darts (SMILE software Numeracy) Hopslide (SMILE software Mathematical Puzzles) Tadpoles (SMILE software Mathematical Puzzles) AddsUpTo (SMILE software Numeracy) Spirals (SMILE software Investigations) Avoid each other (SMILE Investigations)	1882 1883 1889 1890 1891 1892 1893	Wedges 1 (DIME - Build-up PP) Wedges 2 (DIME - Build-up PP) Regular Tilings 1 (DIME - Regular Tilings Project) Use A Triangles, B Convex Quadrilaterals, C Concave Quadrilaterals, E 2 Sizes of Squares. For each activity do questions 1 - 3. Regular Tilings 2 (DIME - Regular Tilings Project) Use F Polygons. Do questions 1 - 4. Regular Tilings 3 (DIME- Regular Tilings Project) Use D Pentagons. Do questions 1 - 3. Line Symmetry B 1 - 3 (DIME- Line Symmetry Puzzles B PP5B) Line Symmetry B 4 - 6 (DIME- Line Symmetry Puzzles B PP5B)
1721 1728 1729 1730 1731 1732 1745 1746 1747 1755 1767 1776 1777	Angle 90° (SMILE software Angle Estimation) BoxD (SMILE software Sense of Number) Minimax (SMILE software Sense of Number) Wall (SMILE software Sense of Number) Rose (SMILE software Investigations) 3D Maze (SMILE software Movement) Identify (SMILE software Properties of Number) Define (SMILE software Properties of Number) Darts (SMILE software Numeracy) Hopslide (SMILE software Mathematical Puzzles) Tadpoles (SMILE software Mathematical Puzzles) AddsUpTo (SMILE software Investigations) Avoid each other (SMILE Investigations) Students' HB Invest Pg 35) Jumping (SMILE software Mathematical Puzzles)	1882 1883 1889 1890 1891 1892 1893	Wedges 1 (DIME - Build-up PP) Wedges 2 (DIME - Build-up PP) Regular Tilings 1 (DIME - Regular Tilings Project) • Use A Triangles, B Convex Quadrilaterals, C Concave Quadrilaterals, E 2 Sizes of Squares. • For each activity do questions 1 - 3. Regular Tilings 2 (DIME - Regular Tilings Project) • Use F Polygons. • Do questions 1 - 4. Regular Tilings 3 (DIME- Regular Tilings Project) • Use D Pentagons. • Do questions 1 - 3. Line Symmetry B 1 - 3 (DIME- Line Symmetry Puzzles B PP5B) Line Symmetry B 4 - 6 (DIME- Line Symmetry Puzzles B PP5B) Line Symmetry B 7 - 10 (DIME- Line
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1903	Numbers (SMILE software Properties of Number)	2119	Patterns (SMILE 1783 Calculating: Pages 12 & 13)
1908	Pattern Pack A (DIME - Pattern Pack A PP6A)	2120	Productive (SMILE 1783 Calculating: Page 14)
1909	Pattern Pack B (DIME - Pattern Pack B PP6B)	2121	Hot and Cold (SMILE 1783 Calculating: Page 15)
1920	Pattern Spotting (SMILE Properties of	2122	Target 200 (SMILE 1783 Calculating: Page 16)
	Number Students' HB Pg 16)	2123	Missing Signs (SMILE 1783 Calculating: Page 17)
1936	Many Grids (SMILE Properties of	2124	Date of Birth (SMILE 1783 Calculating: Pg18 /19)
	NumberStudents' HB Pg 28)	2125	Escape (SMILE 1783 Calculating: Pages 20 & 21)
1950	Diagonal Multiples (Students' HB Properties	2126	Problems (SMILE 1783 Calculating: Pages 22 & 23)
	of Number Pg 29)	2194	Tossing Coins (SMILE Investigations Students' HB
	One Million (TARQUIN Poster)		Pg 38 /40)
	Curve Stitching (TARQUIN Poster)	2202	Visiting Every Point (SMILE Investigations
	One Dice (DIME - Probability Pack A)		Students' HB Investi. Pg 8)
	Numbers Up (DIME - Probability Pack A)	2284	BoxN (SMILE software Sense of Number)
	Two Dice (DIME - Probability Pack A)	2285	GuessN (SMILE software Sense of Number)
	Five Beads (DIME - Probability Pack B)	2286	Quadrants and Squares (DIME - Algebra
	Seven Beads (DIME - Probability Pack B)		through Geometry)
2008	Curves of Pursuit (TARQUIN Poster)		Worksheets A3, A4
	Three Counters (DIME - Probability Pack A)	2287	Add and Subtract Squares and
	Six Beads (DIME - Probability Pack B)		Quadrants (DIME - Algebra through Geometry)
	Four Beads (DIME - Probability Pack B)		Worksheets A5, A6
	Tessellation Poster (TARQUIN Poster)	2288	Algebra Tak-Tiles on a Grid (DIME-
2014	Probably Probable? (Students' HB		Algebra through Geometry) Worksheets B1, B2, B3, B4, B5, B6
	Investigations Pg 43)	2289	
2073	Tricubes (DIME - Tricube Puzzles Project)	LLUJ	- Algebra through Geometry)
	Worksheets A1, A2, A3, A4		 Worksheets C1, C2, C4, C5, C6
2074	Building with Tricubes (DIME - Tricube Puzzles Project)	2290	A New Unit of Area (DIME-Algebra through Geometry)
	Worksheets B2, B6, B10		 Worksheets D1, D2, D3, D4, D5, D6
2075	Tricube Plans (DIME - Tricube Puzzles Project)	2291	5 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -
	• Worksheets C1, C5, C6, C8		Geometry)
2076	Building on a Square (DIME - Tricube	2226	Worksheets E1, E3, E4) Henci (2011) 5 (2011) 6 (201
	Puzzles Project) Worksheets D1, D5, D8, D10		Hanoi (SMILE software Mathematical Puzzles)
2077	Making a 3 x 3 x 3 Cube (DIME - Tricube		Hats (SMILE software Mathematical Puzzles)
	Puzzles Project)		Queens (SMILE software Movement)
	Worksheets E3, E7, E10		TenSprint (SMILE software Numeracy)
2086	Circles to Polygons (SMILE Investigations	2378	Matching Fractions (SMILE software Numeracy)
0004	Students' HB Pg 10)	2379	Ordering Fractions (SMILE software Numeracy)
	Squares (SMILE Investigations Students' HB Pg 4)	2380	NumberLines (SMILE software Numeracy)
	Mystery (SMILE 1783 Calculating: Page 3)	2381	NumberLinesD (SMILE software Numeracy)
	2 Puzzles (SMILE 1783 Calculating: Page 5)	2393	Equivalent Pair (SMILE software Enriching Number)
2115	Missing Digit (SMILE 1783 Calculating: Page 8)		Make that Number (SMILE software Enrich No)
	Operations (SMILE 1783 Calculating: Page 9)		Maximum Remainder (SMILE software EnrichNo)
	Rumour (SMILE 1783 Calculating: Page 10)		FindTheLine (SMILE software Graphing)
2118	Ticket Sales (SMILE 1783 Calculating: Page 11)	2397	Guess Inequality (SMILE software Graphing)

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ACTIVITY LIST Smile 0001 - 2403



Abbreviations used, in alphabetical order.

Abbr	AT	Flow
3-D	AT3	3-D
A&P	AT3	Area and Perimeter
Add	AT2	Addition
AlDa	AT4	Analysing and Interpreting Data
Alg	AT2	Algebraic Structure
Ang	AT3	Anala
APr	AT3	Angle Properties
CDa	AT4	Collecting Data
CiM	AT3	Circle Measurement
Coo	AT3	Coordinates
CTr	AT3	Combined Transformations
DDa	AT4	Displaying Data Decimals
Dec	AT2	
Div	AT2	Division
DNo	AT2	Directed Number
Dra	AT3	Drawing
Equ	AT2	Equations
Fra	AT2	Fractions
Gra	AT2	Graphs
L&S	AT4	Logic and Sets
Map	AT2	Mappings
Mea	AT3	Measurement
Mix	AT2	Mixed
Mul	AT2	Multiplication
Or/R	AT2	Ordering and Rounding
O.R.		Other Resources
P&R	AT2	Powers and Roots
PaG	AT2	Patterns and Generalisations
Per	AT2	Percentages
PNo	AT2	Properties of Number
Pro	AT4	Probability
PSh	AT3	Properties of Shape
PV/N	AT2	Place Value/Number Systems
Rat	AT2	Ratio
Ref	AT3	Reflection
ReP.		Resource Programs
Rot	AT3	Rotation
S/En	AT3	Similarity/Enlargement
SAV	AT3	Surface Area/Volume
Seq	AT2	Sequences
Sha	ETA	Shape
Sub	AT2	Subtraction
Тор	AT3	Topology
Tr/V	AT3	Translation/Vectors
Trig	AT3	Trigonometry
UGr	AT2	Using Graphs

Other Abbreviations (lower case)

Any activity with abbreviations in **lower case** indicates that the activity is a SMILE activity.

w/s	denotes worksheet
(box)	SMILE activities that are not usually stored with the Workcards or Worksheets. Written in lower case letters in brackets. e.g. (poster)
(Calculatin	g) Activities which can be found in SMILE 1783

Calculating Booklet with page number of

activity. Other Abbreviations (UPPER CASE)

Any activity with abbreviations in **upper case** indicates that the activity is a Commercial Reference and **not included** when you purchase SMILE materials.

(ANGLE)	SMILE software 'Angle Estimation'
(COORD)	SMILE software 'Coordinates'
(DIEE)	Software from DfEE
(DIMÉ)	Activities from Tarquin Publications
(ENRICH)	SMILE software 'Enriching Number'
(GRAPH)	SMILE software 'Graphing'
(INVEST)	SMILE software 'Investigations'
(MA Poster)	Poster from The Mathematics Association
(MATH PUZ)	SMILE software 'Mathematical Puzzles'
(MOVE)	SMILE software 'Movement'
(NUM)	SMILE software 'Numeracy'
(PROP/NO)	SMILE software 'Properties of Number'
(PROP/NO Pgx	Page number from the Student's Handbook
	which can be downloaded from the CD
	'Properties of Number'
(SENSE/NO)	SMILE software 'Sense of Number'

Please contact SMILE Mathematics (020 7598 4841) for a complete list of the commercially referenced materials on the SMILE Network.

0171 TV Drinks

0172 A Match for Anyone

0173 Mapping Machines

0001 - 0299

UU	01 - 0277								
0005	Tangram 1	AT3	Sha	4	0174	Gelosia	AT2	Mul	5
0007	Tangram 3	AT3	Sha	5	0177	•	AT3	A&P	6
8000	Prisms & Pyramids	AT3	Dra	4	0178		AT3 AT2	A&P Mix	3 8
0022	Area 1	AT3	A&P	3	01/3	F 001 43	AIZ	IVIIA	·
0023	Area 2	AT3	A&P	4	0181	Alf Mike or Leena	AT2	Мар	5
0024	Area 3	AT3	A&P	3	0182	Mappings to Graphs	AT2	Gra	6
0025	Area 4	AT3	A&P	4	0183		AT2	Gra	6
					0184		AT2	Equ	6
0027	Number Squares w/s	AT2	Equ	1/2	0185	Which is Larger?	AT3	A&P	4
0028	Number Squares 2 w/s	AT2	Equ	1/2	040		470		•
0000	Number Sausses Aude	ATO	۸۵۵	•	0187		AT2	Map	6
0030 0031	Number Squares 4 w/s Find the Number 1 w/s	AT2 AT2	Add Equ	3 1/2	0188		AT3 AT3	Trig Trig	6 7
0031	Find the Number 1 w/s	AIZ	Equ	1/2	0190		AT3	Trig	7
0033	Find the Number 3 w/s	AT2	Equ	3	0191		AT3	Trig	7
0034	Find the Number 4 w/s	AT2	Equ	4		, , ge . e . , . e	,	5	·
0035	Squares and Triangles	AT3	Sha	3					
0039	About Angles	AT3	APr	5				_	_
0040	Equilateral Triangle	AT3	Sha	4	0211		AT3	Dra	5
0046	Damina	AT3	S/En	-	0212 0213		AT3 AT3	Dra Dra	5 6
0046	Domino	AIS	S/EII	5	0213		AT3	Mea	1/2
0048	Tetromino	AT3	CTr	4	0215	•	AT2	Gra	6
0040	retronmio	7,10	0	•	02,10	Drawing the Elite	, <u>-</u>	0.4	Ŭ
0050	Dissection 1	AT3	Sha	3	0220	Triangle Numbers 1	AT2	P&R	4
0051	Dissection 2	AT3	Sha	4	0221	Triangle Numbers 2	AT2	PNo	5
0052	Dissection 3	AT3	Sha	4					
0053	Dissection 4	АТЗ	Sha	4	0224	Area of a Parallelogram	ETA	A&P	6
0054	Dissection 5	AT3	Sha	5			470		_
0057	Fractions 3 w/s	AT2	Fra	4	0226		AT3	A&P	6
0058	Fractions 4 w/s	AT2	Fra	4	0227 0228	•	AT3 AT3	A&P A&P	6 6
0066	Napier's Rods	AT2	Mul	4	0220	From Faranelogiam to Nectarigie	AIS	Aar	0
0000	Hapier 3 Hods	712	widi	•	0230	Square Pegs in Round Holes	AT2	P&R	5
0068	Accurate Measuring	AT3	Mea	4		545 40 × 5 5 5 × 1100 × 1000			•
0069	Cardioid w/s	AT2	Seq	4	0232	Inscribed Circle	AT3	Dra	6
0070	Isometric Drawing	AT3	3-D	4	0233	Rectangle Patterns	AT2	PNo	3
0071	Envelopes	AT3	Dra	3					
0072	Angles of a Quadrilateral	AT3	APr	5	0235		AT3	APr	5
0073	Time/Distance Graph	AT2 AT2	UGr	5	0236	Triangle Problems	AT3	A&P	6
0074 0075	Sum & Product w/s Networks	AT3	Mix Top	3 5	0240	Odds and Evens Tables	AT2	PNo	5
0073	Networks	Ais	юр	3	0240	•	AT2	Map	1/2
0085	Calculator Problems	AT2	Add	3		Cracking the Code w/s	AT2	Мар	3
						-			
0090	More Calculator Problems	AT2	Mul	5	0244	• • • • • • • • • • • • • • • • • • • •	AT4	L&S	1/2
				_	0245	Venn Diagrams	AT4	L&S	3
0092	Harder Calculator Problems	AT2	Mix	5	0040	MalianTee	470		4 10
0098	Plaited Cube w/s	АТ3	3-D	6	0248 0249	3	AT2 AT2	Add Add	1/2 1/2
0098	Sum & Product Again w/s	AT2	Mix	3	0249		AT2	Or/R	3
	5			-	0251		AT3	Ref	3
						• •			
					0255	Points and their Images	STA	Ref	6
0404	N	470				0-14	470	0	_
0104	Number Puzzle 1	AT2	Add	4	0257	, ,	AT2	Seq	5
0105	7 Piece Tangram	AT3	Sha	5	0258 0259		AT2 AT2	Seq Fra	5 3
0114	Nines w/s	AT2	PaG	3	0239	Sitading Fractions W/S	AIZ	r Ia	3
0115	Columns	AT2	PaG	1/2	0261	Co-ordinates 1	AT3	Coo	3
					0262		AT3	Coo	4
0119	Area and Perimeter	AT3	A&P	5	0263	Co-ordinates 3	AT3	Coo	4
0120	Chocolate Areas	ETA	A&P	6	0264		AT3	Coo	4
0121	100 Square Patterns w/s	AT2	PaG	1/2	0265	Odd and Even	AT2	PNo	1/2
0100	Country Duranta	AT4	100		0007	Analog of a Daluman	ATO	A D -	-
0123	Counter Puzzle	AT4	L&S	4	0267 0268		AT3 AT3	APr APr	5 5
0131	Matchstick Puzzles	ЕТА.	PSh	4	0269		AT3	APr	6
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0133	Out of Line	AT3	L&S	4	0272	Vehicle Survey w/s	AT4	CDa	3
					0273	How Much Longer?	AT3	Mea	4
0142	Volumes of cubes	AT3	SAV	6					-
0143	Volumes 2	AT3	SAV	6	0281	Angles: The Compass	AT3	Rot	3
0144	All out of Line	AT3	Tr/V	6	0004	Angles from Toppelletions	ATO	APr	•
0145	Tetraflexagon	AT3	3-D	6	0284	Angles from Tessellations	АТЗ	AFI	6
0151	More 100 Square Patterns	AT2	PaG	1/2	0286	Right-angles	AT3	Ang	3
	. 4			-				3	-
0153	Decimal Calculations	AT2	Dec	7	0288	Rolling Two Dice w/s	AT4	Pro	4
								_	
0155	Calculator Trial and Error	AT2	Mix	7	0290	•	AT4	Pro	4
0455	Apples of a Tales -1-	470	A D		0291		AT4	L&S	4
0159	Angles of a Triangle	AT3	APr	4	0292	Doubling Patterns w/s	AT2	PaG	4
0161	The Three Coin Problem	AT4	Pro	6	0294	Measuring Lengths	АТЗ	Mea	3
0162		AT2	Mix	7	0294	3 3	AT3	Dra	4
0.02	_, 0, ., 0			•	0233			_, u	•
0164	Patterns with 11 and 13	AT2	Div	4	0297	More Rectangle Numbers	AT2	PNo	3
0165	Cyclic Quadrilateral	AT3	APr	7	0298	•	AT2	P&R	4
0166	9	AT3	A&P	5	0299	Three Squared	AT2	P&R	5
0167	x for Breakfast	AT2	Map	5					
	Right Angled Triangles w/s	AT3	A&P	5					
	Half a Rectangle	AT3	A&P	5					
0170	Hex TV Drinks	AT4	L&S Man	6 3					

Мар

Map Map

AT2

AT2

3

0301 - 0799

0307 0308	Factors Prime Numbers	AT2 AT2	PNo PNo	4 5	0432 0433	Moving Pictures Acute/Obtuse	AT3 AT3	CTr APr	5 6	0616 0617	The Unknown Square Looking Around w/s	AT2 AT3	Alg 3-D	7 1/2
0310 0311	Common Factors Factor Finder	AT2 AT2	PNo PNo	5 · 5	0437	Chess	AT2	PaG	5	0629	Time Tiles	AT3	Mea	4
0311					0439	Rectangle Diagonal	AT2	PaG	7	0634	Sidings	AT4	Pro	6
0313 0314	Spots in Sequences Dots in Sequences	AT2 AT2	Seq Seq	, 3 5	0443	Who Won?	AT2	Fra	6	0674	A Hungry Death?	AT4	L&S	5
0315	Staircases	AT2 AT2	Seq Seq	6 3	0448	Favourite Colours w/s	AT4	DDa	1/2	0675	Cube Cuts	ETA	CTr	7
0316 0317	Counting On w/s Sequences of Numbers	AT2	Seq	4	0446					0677	Logic Maps	AT4	L&S	5
0320	Turning Patterns	AT3	Rot	3	0450	Trick or Treat	AT2	Seq	6	0683	Fraction Sort	AT2	Fra	6
					0452	Inside or Outside?	AT3	Тор	5	0684	Forty Towers	AT4	Pro	7
0322 0323	Cutting up Rectangles Metre and Centimetre	AT3 AT3	Sha Mea	1/2 3	0453 0454	What Can I Wear? Post Box	AT4 AT3	Pro Trig	5 EP	0689	Random Code	AT2	Equ	6
0324	Rotations	AT3	Rot	3	0455 0456	Midpoints Midpoint Sequences w/s	AT3 AT3	PSh Dra	5 3	0691	And now Swahili	AT2	Equ	5
0326	Tessellations of Quadrilaterals	ЕТА	Sha	6	0457	Number Pictures	AT2	Add	1/2				,	
0327	Centres of Rotation w/s	AT3	Rot	5	0458 0459	Adding Numbers Adding Shapes	AT2 AT2	Add Add	1/2 1/2	0694 0695	Which Switches? Locate the Error	AT4 AT3	Pro CTr	5 4
0330	Multiple Patterns	AT2	PNo	5	0460	Carry on Adding	AT2	Add	3	0696 0697	Number Codex Hidden Shapes w/s	AT2 AT3	Equ PSh	6 5
0331	Prime Factors	AT2	PNo	6	0461	Venus Clock	AT2	Alg	4	0097	Hidden Shapes w/s	AIS	1 311	3
0333 0334	Equivalent Fractions Egyptian Numbers	AT2 AT2	Fra PV/N	4 3	0463 0464	Paper Power Subtracting	AT2 AT2	P&R Sub	7 1/2					
	-				0465	Subtraction	AT2	Sub	3		00.1	470	N 41	•
0338 0339	Summing the Odds Vector Messages	AT2 AT3	PNo Tr/V	5 4	0467	Subtract	AT2	Sub	1/2	0705	Cross Puzzles w/s	AT2	Mix	3
0340	Is it Rigid?	AT3	PSh	6		March metal or fe	4.70	0	-	0709	Reflection	AT3	Ref	5
0341 0342	Nodes w/s About Nodes	AT3 AT3	Top Top	5 7	0470	Nephroid w/s Border Patterns	AT2 AT3	Seq Tr/V	5 1/2	0713	Jumping Jack w/s	AT2	Seq	1/2
0244	Country Hopping Buzzlo	ΑΤЭ	PaG	7	0472	Sort the Cards	AT4	L&S	6	0719	Cuboid Nets	АТЗ	Dra	6
0344	Counter Hopping Puzzle	AT2	raG	,	0474	Triominoes	AT2	PNo	4	0720	Nets of Pyramids	AT3	Dra	7
0346	Sequences in Squares w/s	AT2	Seq	4	0475 0476	All Change Mapping w/s	AT4 AT2	L&S Map	4 5	0721 0722	Squares Tangram Prove It	AT3 AT2	Sha Alg	5 EP
0348	Tangram Teasers	STA	Sha	5	0477	Shunting	AT4	L&S	8					
0349	Tetrahedron Nets	АТЗ	Dra	4	0478	Patterns with Squares	AT3	CTr	1/2	0725	Race Track w/s	AT3	Tr/V	6
0352	Table Squares w/s	AT2	Seq	4	0481	Where's that Town?	AT3	Coo	5	0727	Who's Who?	AT4	L&S	5
0353 0354	Bowling Tom Tom the Bowling Champ w/s	AT2 AT2	Add Add	1/2 3	0483	Star Puzzle	AT2	PaG	5	0730	Rotation w/s	AT3	Rot	5
0355	Bowling Tom's Problem	AT2	Add	3	0484 0485	Octahedron Nets Pamphlets	AT3 AT2	Dra Equ	5 8	0731 0732	Regular Polygons Ruler, Pencil, Compass	AT3 AT3	APr Dra	8 5
0359	How Many Colours? w/s	АТЗ	Тор	4		,		·						
0362	No Brakes Bruce	AT2	UGr	6	0489	Underground	AT2	Mix	4	0734 0735	Start with a ² Knots w/s	AT2 AT2	Alg Mul	8 3
0364	Using a Triangle	АТ3	PSh	6	0492 0493	The Inseparables Sam Shape w/s	AT3 AT3	Top PSh	7 1/2	0736 0737	Solving Equations What Chance?	AT2 AT4	Equ Pro	7 6
0365	A Million	AT2	Mix	5	0494	All Co-ordinates	AT3	Coo	5	0738	Family of Quadrilaterals	AT3	PSh	8
0366 0367	2-Piece Square Fraction Wall w/s	AT3 AT2	PSh Fra	4 5	0495 0496	Routey Junior Contig	AT3 AT2	Top Mix	5 4	0740	Solve it	AT2	Egu	6
						oug			·	0741	The 38th Triangle Number	AT2	Alg	EP
0376 0377	A Hundred Vector Sea	AT2 AT3	PV/N Tr/V	4 4						0743	Solving by Graphs	AT2	Gra	7
	Cubaida from Matabhayaa	АТЗ	SAV	6	0510	Radar w/s	АТЗ	Ang	5	0744 0745	Equations and Graphs Inverses	AT2 AT2	Gra Map	7 7
0381	Cuboids from Matchboxes		SAVV	b	0310					0746	Pascal's Triangle	AT4	Pro	7
0383 0384	Building Shapes w/s Changing Grids w/s	AT2 AT3	Seq Coo	5 4	0516 0517	Adding Directed Numbers Subtracting Directed Numbers	AT2 AT2	DNo DNo	6 7	0748	The Times Crossword	AT2	PNo	7
					0518	(Do it first)	AT2	Mix	5	0749	Three Numbers	AT2	Mix Pro	5 6
0386	Think of a Number	AT2	Мар	4	0528	Multiplying	AT2	Mul	4	0750	Monopoly	AT4	PIO	0
0388	Power	AT2	P&R	6	0549	Marbles	AT2	DNo	5	0752	Repeating Digits	AT2	Div	6
0390	Surfaces w/s	AT4	L&S	3	0550	Adding Shifts w/s	AT2	DNo	5	0755	Rectangles to Regions	AT2	Gra	8
0392	Circumference	AT3	CiM	5	0557	A Special Number	AT2	PV/N	EP	0756 0757	Points of Intersection Centigrade and Fahrenheit	AT2 AT2	Equ Equ	EP 7
0204	Concentric Circles	АТЗ	Dra	4	0560	Symmetrical Cross Cut	АТЗ	Ref	6	0758	Odd One Out	AT2	Div	5
0394						•				0760	Quickly to Zero	AT2	Div	6
0396 0397	Hexagons w/s Operations	AT2 AT2	Fra Alg	4 8	0563	Digit Sum	AT2	Seq	8	0761	Orbits	AT3	CiM	7
0398	4 + 3 x 2	AT2	Mix	5	0574	Line of Best Fit	AT4	DDa	7	0772	Angle Estimation	STA	Ang	5
0399	Cubes	АТЗ	SA/V	8	0577	Reflect w/s	AT3	Ref	6	0775	Measuring Angles	АТЗ	Ang	4
					0579	Two Loops	AT4	L&S	3	0776 0777	Drawing Angles Satelite Signals w/s	AT3 AT3	Ang Ang	4 5
						·				0778	Tangrams (MA poster)	AT3	Sha	5
0400	Folding Symmetry	АТ3	Ref	1/2	0581	Using a Mirror (DIME)	AT3	Ref	6	0780	Long Mult. Revision	AT2	Mul	5
0402	Adding Fractions	AT2	Fra	6	0585	Three Loops	AT4	L&S	4	0781 0782	The Inverse Number Pattern Proof	AT2 AT2	Map PaG	5 EP
0404	Solids w/s	АТЗ	3-D	3	0590	Less Marks are Best!	AT3	Mea	7	0783	Cubes from Triangles	AT2	PaG	7
0406	Two Folds	АТ3	Ref	1/2	0591 0592	Counter Placing Powerful Rules	AT4 AT2	L&S P&R	6 7	0784	142857 Times Table	AT2	PaG	6
							AT3	SAV		0788 0789	Free Hand Angles Gradient	AT3 AT2	Ang Gra	5 8
0411	Hexagon Dissection	AT3	Sha	5	0595	Best Fitting Peg								
0414	Bi-Fractions	AT2	PV/N	EP	0597	Sunita's Day	АТЗ	Mea	3	0791 0792	A Millionaire Wage Bargaining	AT2 AT2	Rat Per	7 5
0423	Clock Arithmetic	AT2	PV/N	3						0793	Approximation and π	AT3	CiM	EP 7
0424	How Many Routes? w/s	ЕТА	Тор	4						0794	The Trapezium	AT3	A&P	
0426	Traversable?	AT3	Тор	6	0600	In your Mind	AT4	L&S	7		Darts Probability Matrices and Transformations	AT3 AT3	CiM CTr	EP 8
	One Difference Logichains	AT4	L&S	3	0603	Numbering the Pages	AT2	PaG	6					-
	Squaring Parallel Lines	AT2 AT2	P&R Gra	5 6	0614	Powers of Ten w/s	AT2	P&R	7					
					1					•				

0800	Polygons: Interior Angles	AT3	APr	6	1013	Vector Magnitudes	АТ3	Tr/V	8	1320	Rectangle Areas	АТЗ	A&P	
0804	Inflation	AT2	Per	8	1028	Isometries	АТ3	CTr	EP	1321 1322	Prism or Pyramid? w/s Solid Shapes	AT3 AT3	3-D 3-D	4 3
0805	Average Pack of Workcards	AT4	AlDa	7	1020	130THERRES	AIS	Cii	Er	1323	Tak Tile Areas	AT2	Alg	EP
0806	Trapezium to Parallelogram	AT3	A&P	7	4004	ъ.		_	_	1324	Pegboard Sums	AT2	Add	1/2
0808	Code Breaking	AT4	AlDa	. 5	1081	Puzzles	AT2	Equ	5	1328	Room to Move	АТЗ	Mea	5
0809	Fold It	AT3	APr	5	1094	Volume of Prisms	AT3	SAV	7	1329	Journeys	AT3	Tr/V	7
					1095	Percentages w/s	AT2	Per	5					_
0812 0813	Irregular Areas Sectors of Circles	AT3 AT3	A&P CiM	8 EP	1096 1097	Marks to Percentages w/s Fractions to Percentages	AT2 AT2	Per Per	6	1331 1332	Equal Angles (DIME) Rotation (DIME)	AT3 AT3	APr Ang	5 6
0010	Sectors of Shores	A10	Onvi	-	1037	Tractions to refeemages	712	1 61	·	1333	Directions (DIME)	AT3	Ang	8
0817	Straight Line Graphs	AT2	Gra	7						1334	Recognising Solids (DIME)	AT3	3-D	5
0818 0819	Differences Between Squares Prove Your Identity	AT2 AT2	Alg Alg	7 EP						1335 1336	Sketching Solids (DIME) Turning and Toppling (DIME)	AT3 AT3	3-D CTr	6 6
0820	Equations from Squares	AT2	Alg	EP	1101	Pie Charts	AT4	DDa	6	1337	Reflections (DIME)	AT3	Ref	7
										1338	Wedges (DIME)	AT3	CTr	8
0824	Golden Rectangle	AT2	Rat	8	1112	Rotation	AT3	Rot	6	1339 1340	Flags (DIME) Pattern and Notation (DIME)	AT2 AT2	Map Equ	5 7
0827	Clover Leaf	AT3	CiM	EP	1115	Graphs	AT4	UGr	5	1341	Number Machines (DIME)	AT2	Мар	6
0000	D. Carretter	470	A1-		4400	Translation	ATO	T.A.	_	1342	Mappings and Graphs (DIME)	AT2	Gra	7
0830 0831	Re-Grouping Primes and Proof	AT2 AT2	Alg PNo	6 EP	1123	Translation	AT3	Tr/V	6	1343 1344	Simple Mappings (DIME) Further Mappings (DIME)	AT2 AT2	Map Map	6 7
0832	Short Division	AT2	Div	3	1127	Time-Distance Graphs	AT2	UGr	7	1345	Mastermind	AT4	L&S	8
0833	Short Division-Carrying	AT2	Div	4	1120	lournove	ΛTO	۸	7	1348	Look and Guonn	ΛΤΩ	Mea	2
0834	Dividing Strips	AT2	Div	3	1130	Journeys	AT3	Ang	7	1348	Look and Guess Time Line	AT3 AT3	Mea	3 1/2
0837	Inverse Mappings	AT2	Map	7	1132	What's the Probability?	AT4	Pro	5					
0838 0839	Scale Factor Rotate this way w/s	AT3 AT3	S/En Rot	6	1136	Solving Equations	AT2	Equ	7	1352 1353	Wheels A Number of Things	AT3 AT2	Rot Mix	5 3
0639	Hotate this way w/s	AIS	HUL	•	1137	Solving Equations Solving Harder Equations	AT2	Equ	8	1354	Euler Solids (MA Poster)	AT3	3-D	7
0843	Very Large Numbers	AT2	P&R	8				•		1355	Halves and Quarters w/s	AT2	Fra	1/2
0844	Very Small Numbers	AT2	P&R	8	1156	Transformations	AT3	CTr	8	1356	How Much?	AT2 AT2	Add Mix	1/2 4
0845	Negative Scale Factor	AT3	S/En	8	1170	Compass Constructions	АТЗ	Dra	6	1357 1358	Missing Signs Joining Multiples w/s	AT2	PNo	
0849	Anywhere on the Number Line w/s	s AT2	Alg	6		•				1359	Joining Odds and Evens w/s	AT2	PNo	
0850 0851	Multiplication Problem? Tile Patterns	AT2 AT3	Mul Sha	5 1/2	1177 1178	Vectors More Vectors	AT3 AT3	Tr/V Tr/V	EP EP	1360 1361	Pictures from Multiples w/s Three in Line	AT2 AT2	PNo Add	3 3
0852		AT4	Pro	1/2	1179	Column Vectors	AT3	Tr/V	EP	1301	Three in Line	MIZ	Auu	3
0853	Grids	AT3	Coo	4						1365	Number Snap	AT2	Mul	3
0854 0855	Perimeter	AT3 AT3	A&P Mea	3 3						1366 1367	Pairs Lines	AT2 AT2	Mul PNo	1/2 3
0033	How Long?	713	IVICA	٠						1307	Lilles	A12	1110	
0857	It's Raining	AT4	AlDa	1/2	1202	Significant Figures	AT2	Or/R	7	1369	Infinity	AT2	Seq	EP
0859	Triangle Pairs	AT3	PSh	3	1208	Percentage Sales	AT2	Per	7	1376	Jobs in Order	AT4	L&S	1/2
0860	The Same Area	AT3	A&P	4	1200	1 crocking Gales	\\\Z	7 61	´	1377	Dice	AT3	3-D	4
0861	Triangle Spirals	AT2	Seq	4	1233	Frequency Graphs	AT4	AlDa	6	1378	Mappings	AT2	Мар	6
0862 0863	Square Spirals Deal the Cards	AT2 AT2	Seq Div	3	1257	Volume of Cuboids	AT3	SAV	7	1379	Fishing w/s	AT3	Coo	4
0864	People in Villages	AT4	DDa	3	1258	The Biggest Vase	AT3	SAV	8	1381	Money	AT2	Mix	1/2
0000	Oladas Ossatsus	470	D :		1259	Lengths of Similar Objects	AT3	S/En	8	1382	Paper Folding	AT3	PSh	6
0866 0867	Sharing Counters Dividing Counters	AT2 AT2	Div Div	3 3	1261	Similar Solids	AT3	S/En	FP	1383 1384	Good Guesswork Diagonals	AT3 AT3	Mea PSh	4 3
0868	Evens w/s	AT2		1/2	1201	Cirrial Condo	,,,,	O/ L.		1385	Times Square	AT2	Mul	1/2
0869	Puzzle w/s	AT2	Mix	1/2	1267	Cum. Freq. from Grouped Data	AT4	AlDa	8	1000	D- 11-11-	ATO	0/5-	_
0870	Find the Stranger	AT4	L&S	4	1269	Probability	AT4	Pro	7	1388 1389	Double-Up Converging Sequences	AT3 AT2	S/En PaG	5 EP
0872	How Heavy?	AT3	Mea	3	,		, ., .			1390	Multiplication Facts w/s	AT2	Mul	4
0876	Identities	ATO	A1~	7	1272	Comb Probs from Tree Diagrams	AT4	Pro	EP	1394	Turn the Tables	AT2	PNo	6
0877	Identities Angle 4 Review	AT2 AT3	Alg APr	6	1275	Vol and Surface Area of Cylinders	АТ3	SAV	7	1394	Multiplication Table Patterns	AT2	PNo	6
	· ·					•				1396	Two Digit Sums	AT2	Alg	EP
0881 0882	24 Squares w/s Lies, Damned Lies & Statistics	AT2 AT4	Div AlDa	3	1278 1279	Multiplying Directed Numbers. Dividing Directed Numbers	AT2 AT2	DNo DNo	7 7	1398	Tring	АТЗ	Tr/V	6
0002	Lies, Danned Lies & Statistics	AI4	AIDa		12/5	Dividing Directed Numbers	AIZ	DINO	′	1399	Trigg Babylonian Method	AT2	PV/N	
0884	Positive or Negative?	AT2	DNo	6	1281	Using Gradients	AT2	UGr	EP		,			
0885	Number Noughts & Crosses	AT2	Add	3	1287	Equilateral Construction	AT3	Dra	5					
0889	Old Oak	AT2	UGr	4	0,				_					
0004	Fares Mass	ATO	T-0/	.	1292	Sampling Shoes	AT4	CDa	5	1400	A Transformation Technique	AT3	CTr	EP
0894 0895	Force Meet Jumps w/s	AT3 AT2	Tr/V Mul	8 3	1294	Cooking Numbers	AT2	Rat	5	1404	Action Equations	AT2	Equ	4
0896	How Thick?	AT3	Mea	6	1295	Second-hand Cars	AT4	DDa	6	1405	Jump Equations	AT2	Equ	4
0897	Statistics 3 Review	AT4	AlDa	5	1200	Tanaram Arrawa w/a	АТЗ	Sha	4	1406	Equality and Inequality	AT2	Equ	5
0899	Time Bingo	AT3	Mea	1/2	1299	Tangram Arrows w/s	AIS	Sna	4	1408	Thermometer Readings	AT3	Mea	4
	J									1409	The Mean	AT4	AlDa	. 4
										1411	Roman Numerals	AT2	PV/N	I 5
										1411	Algebra Puzzle	AT2	Map	7
0900	24 Hour Bingo	ETA	Mea	3	1300	Measuring Windows	AT2	Dec	5		Twelve Inch Perimeter	AT3	A&P	4
0000	Adilliana	ATO	Miss	_	1301	Three in a Line	AT4	L&S	4	1415	Simple Oundration	ATO	Fau	0
0903 0904	Millions Carry on Subtracting	AT2 AT2	Mix Sub	6 3	1302	Logi Puzzle	AT4	L&S	6	1415	Simple Quadratics	AT2	Equ	8
0905	Domino Puzzle	AT4	L&S	7	1304	An Honourable Problem	AT4	L&S	4	1417	Tens	AT2	Add	1/2
0906	Tak Tiles A (DIME)	AT3 AT3		1/2 1/2	1305 1306	Factorials! Decimal Estimation	AT2 AT2	Mix Div	EP 5	1418 1419	Series Geometrically Versa-Tiles	AT2 AT3	Seq APr	EP 6
0907 0908	Tak Tiles B (DIME) Tak Tiles C (DIME)	AT3		1/2	1306	Sections Sections	AT2	PaG	5	1419	Perpendicular Proof	AT2	APr	EP
0909	Tak Tiles D (DIME)	AT3	Sha	3	1308	Problems	AT2	Equ	8		·		_	
0982		AT2	Equ	7	1309	More Vector Messages w/s	AT3	Tr/V	5	1422 1423	Rectangles in Circles Calculator Guesses	AT3 AT2	PSh Or/R	4 3
4446	Letters for Lengths		-44	· 1	4040	Matchatial Convenee	AT2	Seq	3	1423	Dividing by Guessing	AT2	Div	5
	Letters for Lengths	7112	•	Ī	1312	Matchstick Sequences	–	004			Dividing by Guessing		DIV	
	Letters for Lengths	AIL.	·		1312	Match Patterns	AT2	Seq	6		<i>3</i> , v			
	Letters for Lengths	AIL	·		1313	Match Patterns	AT2	Seq		1426	Decimal Lines	AT2	Dec	4 4
1007	Cumulative Frequency and Q'tiles		AlDa	8	1313 1315 1316	Match Patterns International Paper Sizes Halving	AT2 AT2 AT2	,	6 7 5	1426	<i>3</i> , v			
1007	Cumulative Frequency and Q'tiles	AT4			1313 1315 1316	Match Patterns International Paper Sizes	AT2 AT2 AT2	Seq Rat	7	1426 1427 1429	Decimal Lines Triangles in Circles Multiples of 3 and 9	AT2 AT3	Dec PSh Div	4 5
	-			8 EP	1313 1315 1316 1317	Match Patterns International Paper Sizes Halving	AT2 AT2 AT2	Seq Rat Or/R	7 5	1426 1427 1429	Decimal Lines Triangles in Circles	AT2 AT3	Dec PSh	4

1432 1433	Triangle Patterns Base -2	AT2 AT2	Seq 6 PV/N EP
1434	Bearings and Scale Drawing	AT3	Ang 6
1435	Back Bearings	AT3	Ang 7
1436	Block Problems	AT3	SAV 4
1437	Four Consecutive Numbers	AT2	Alg EP
1438	Patterns in Pascal's Triangle	AT2	PaG 17
1439	Geometric Progressions	AT2	PaG EP
1454	ISBN's and Errors	AT2	Div 6
4.450	Manage of the Data Manage	470	D-4 - E0
1456 1457	Matrices for Rotations Combining Rotations	AT3 AT3	Rot EP Rot EP
1458	Reflection Matrices Investigation	AT3	Ref EP
1459	Matrices for Shears Investigation	AT3	CTr EP
1460	Diophantine Equations	AT2	Equ EP
1461	Figures for Words	AT2	PV/N 4
1462	Missing Keys	AT2	Mix 4
1463	Using brackets w/s	AT2	Mix 6
	-		
1482	Tricky Sum (MA Poster)	AT2	PaG 6
1484	Decimal Patterns	AT2	Dec 5
1485	Limits	AT2	Seq EP
1486	Threes and Sevens	AT2	PaG 8
1487	Thinking in Three Dimensions	AT3	Trig EP
1488	Angles between Planes	AT3	Trig EP
1500	Subject of a Formula	AT2	Alg EP
1501	Changing the Subject	AT2	Alg EP
1504	Areas under Graphs	AT2	UGr EP
1511	Defining Regions	AT2	Gra 8
1517	· Trig Problems	AT3	Trig EP
1520	Differences Game	AT2	Sub 1/2
1020	Smerences durie	AIL	000 1/2
1522	Eight Cubes	AT3	3-D 1/2
1523	A Red Cube	AT3	3-D 4
1524	4 Cube Solids	AT3	3-D 5
1525	Economical Weaving w/s	AT3	Top 4
			_
1528	Fraction Wall 2	AT2	Fra 6
1533	Proportion	AT2	Rat EP
1537 1538	Sim Equations & Inequalities Solving Simultaneous Equations	AT2 AT2	Gra 8 Equ 7
1000	Solving Childrane Coust Equations	NI_	Equ /
1540	Is There a Solution?	AT2	Equ 7
1541	Cones	AT3	SA/V EP
1543	Composite Functions	AT2	Map EP
, , , ,		/ 1.2	
1555	Mystic Rose w/s	AT2	PaG 5
1556	19 Piece Jigsaw	AT2	PV/N 1/2
1557	Spirals w/s	AT3	Dra 3
4	Assess of Dischler Cl	4	O/F: -
1559	Areas of Similar Shapes	AT3	S/En 7
1560	Similarity Problems	AT3	S/En 8
1561	Combining Transformations Combined Reflections	AT3	CTr 7 Ref 8
1562	Combined Reliections	AT3	Ref 8
1565	Symmetry w/s	AT3	Ref 4
1566	Finding Square Roots	AT2	P&R 5
1568	Velocity from Dist-Time Graphs	AT2	UGr EP
1569	Distance, Velocity & Acceleration	AT2	UGr EP
1570	Pounds and Pence w/s	AT2	Dec 5
1572	50% is Half Marks	AT2	Per 5
1589	Square Roots Investigation	AT2	P&R 7
1591	Domino Sums Two Cuts Investigation w/s	AT2	Add 5 PSh 4
1592	TWO Outs investigation w/s	AT3	ron 4

1604 1605			
	Nim (MATH PUZ)	AT2	PV/N B
1605			
	Guess (SENSE/NO)	AT2	Or/R 1/2
1606	Guess D (SENSE/NO)	AT2	Or/R 5
1607	Elephant (COORD)	AT3	Coo 6
	, , ,		
1608	Reverse (MATH PUZ)	AT2	PaG 5
1609	Maze (MOVE)	AT3	CTr 1/2
1613	Calculating Kitty	AT2	Seq 5
	<u> </u>		,
1614	Probability Kitty	AT4	Pro 7
1615	Logical Kitty	AT4	L&S 5
	,		
1010	Niverban Namaa	470	ON- C
1618	Number Names	AT2	PNo 6
1620	Bounce (DfEE)	AT2	PaG 6
1621	Rhino (COORD)	AT3	Coo 4
1622	Vectmeet (MOVE)	AT3	Tr/V 8
1624	Snooker(ANGLE)	AT3	Ang 5
1625	Box (SENSE/NO)	AT2	PV/N 1/2
1626	Boat (MATH PUZ)	AT4	L&S 5
1627	Self Portrait w/s	AT4	L&S 4
1628	Eight Squares	AT3	A&P 3
1629	Pentagons w/s	AT3	Dra 4
1630	Along the Line	AT2	Mix 4
1631	Target 100	AT2	Dec 6
	•		
1632	Marked Buttons	AT2	Add 4
1634	Colouring the Dots	AT3	Top 4
1635	The Key to Success w/s	AT2	Mix 3
	•		
1636	Calculator Flags w/s	AT2	
1637	Squares and Other Powers	AT2	P&R EP
1638	Tri-umph	AT2	Div 6
1639	Quarto	AT2	Dec 7
,000	Gounto	7112	,
4044	Live (000BB)	470	
1641	Lines (COORD)	AT3	Coo 5
1643	Lucky Dip	AT4	Pro 4
1646	Probability Kitty	AT4	Pro 8
1647	Weaving w/s	AT3	Sha 7
1648	Number Clues	AT2	PNo 3
1649	Walking to School	AT2	Rat 4
1650	Take Part (DfEE)	ReP	
	•		
1651	Frogs (MATH PUZ)	AT2	PaG 5
1652	Jugs (MATH PUZ)	AT2	Seq 7
1653	Master (MATH PUZ)	AT4	L&S 7
	Race Game (MOVE)		
1654	,	AT3	Tr/V 7
1655	The Factor Game	AT2	PNo 5
1656	The Lost Divide	AT2	Div 6
1657	The Great Divide	AT2	Div 7
1658	The Smith Family Circus	AT2	PNo 7
	Mind Reversal		
1659	Willia Hevelsal	AT2	PaG 5
		AT2	
1659 1660	The Champion Flea		PaG 5 Rat 7
1660	The Champion Flea	AT2 AT2	Rat 7
1660 1662	The Champion Flea Get to One	AT2 AT2 AT2	Rat 7 Mix 5
1660	The Champion Flea	AT2 AT2	Rat 7
1662 1663	The Champion Flea Get to One Largest and Smallest	AT2 AT2 AT2 AT2	Rat 7 Mix 5 PV/N 3
1660 1662	The Champion Flea Get to One	AT2 AT2 AT2	Rat 7 Mix 5
1660 1662 1663 1665	The Champion Flea Get to One Largest and Smallest (x+1)²	AT2 AT2 AT2 AT2	Rat 7Mix 5PV/N 3Alg 7
1660 1662 1663 1665 1666	The Champion Flea Get to One Largest and Smallest (x+1) ² Tower (SENSE/NO)	AT2 AT2 AT2 AT2 AT2 AT2	Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6
1660 1662 1663 1665 1666 1667	The Champion Flea Get to One Largest and Smallest (x+1) ² Tower (SENSE/NO) Pilot (MOVE)	AT2 AT2 AT2 AT2 AT2 AT2 AT3	Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6
1660 1662 1663 1665 1666	The Champion Flea Get to One Largest and Smallest (x+1) ² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle	AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT2	Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6 Map 4
1660 1662 1663 1665 1666 1667	The Champion Flea Get to One Largest and Smallest (x+1) ² Tower (SENSE/NO) Pilot (MOVE)	AT2 AT2 AT2 AT2 AT2 AT2 AT3	Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6
1660 1662 1663 1665 1666 1667 1668 1669	The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s	AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT2 AT3	Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6 Map 4 PSh 1/2
1660 1662 1663 1665 1666 1667 1668 1669 1670	The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes	AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT2 AT3 AT4	Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6 Map 4 PSh 1/2 Pro 8
1660 1662 1663 1665 1666 1667 1668 1669 1670 1671	The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box)	AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT2 AT3 AT4 AT2	Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6 Map 4 PSh 1/2 Pro 8 Mul 1/2
1660 1662 1663 1665 1666 1667 1668 1669 1670 1671 1672	The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box) Soma Solids	AT2 AT2 AT2 AT2 AT2 AT3 AT2 AT3 AT4 AT2 AT3	Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6 Map 4 PSh 1/2 Pro 8 Mul 1/2 3-D 6
1660 1662 1663 1665 1666 1667 1668 1669 1670 1671	The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box)	AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT2 AT3 AT4 AT2	Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6 Map 4 PSh 1/2 Pro 8 Mul 1/2
1660 1662 1663 1665 1666 1667 1668 1669 1670 1671 1672	The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box) Soma Solids	AT2 AT2 AT2 AT2 AT2 AT3 AT2 AT3 AT4 AT2 AT3	Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6 Map 4 PSh 1/2 Pro 8 Mul 1/2 3-D 6
1660 1662 1663 1665 1666 1667 1668 1669 1670 1671 1672	The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box) Soma Solids	AT2 AT2 AT2 AT2 AT2 AT3 AT2 AT3 AT4 AT2 AT3	Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6 Map 4 PSh 1/2 Pro 8 Mul 1/2 3-D 6
1660 1662 1663 1665 1666 1667 1668 1669 1670 1671 1672 1673	The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box) Soma Solids HCF and LCM Board Order	AT2 AT2 AT2 AT2 AT2 AT3 AT2 AT3 AT4 AT2 AT3 AT2	Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6 Map 4 PSh 1/2 Pro 8 Mul 1/2 3-D 6 PNo 7 CTr 4
1660 1662 1663 1665 1666 1667 1668 1669 1670 1671 1672 1673	The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box) Soma Solids HCF and LCM Board Order Pythagorean Triples	AT2 AT2 AT2 AT2 AT2 AT3 AT2 AT3 AT4 AT2 AT3 AT2	Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6 Ang 4 PSh 1/2 Pro 8 Mul 1/2 3-D 6 PNo 7 CTr 4 Equ EP
1660 1662 1663 1665 1666 1667 1668 1669 1670 1671 1672 1673	The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box) Soma Solids HCF and LCM Board Order	AT2 AT2 AT2 AT2 AT2 AT3 AT2 AT3 AT4 AT2 AT3 AT2	Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6 Map 4 PSh 1/2 Pro 8 Mul 1/2 3-D 6 PNo 7 CTr 4
1660 1662 1663 1665 1666 1667 1668 1669 1670 1671 1672 1673	The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box) Soma Solids HCF and LCM Board Order Pythagorean Triples Proof by Contradiction	AT2 AT2 AT2 AT2 AT2 AT3 AT2 AT3 AT4 AT2 AT3 AT2 AT3 AT2	Alg 7 Fra 6 Ang 6 Map 4 PSh 1/2 Pro 8 Mul 1/2 3-D 6 PNo 7 CTr 4 Equ EP PNo EP
1660 1662 1663 1665 1666 1667 1668 1669 1670 1671 1672 1673 1675 1676 1677	The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box) Soma Solids HCF and LCM Board Order Pythagorean Triples Proof by Contradiction	AT2 AT2 AT2 AT2 AT2 AT3 AT2 AT3 AT4 AT2 AT3 AT2 AT3 AT2 AT3	Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6 Map 4 PSh 1/2 Pro 8 Mul 1/2 3-D 6 PNo 7 CTr 4 Equ EP PNo EP 3-D EP
1660 1662 1663 1665 1666 1667 1668 1669 1670 1671 1672 1673 1675 1676 1677	The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box) Soma Solids HCF and LCM Board Order Pythagorean Triples Proof by Contradiction Spheres Reflect-a-Bug	AT2 AT2 AT2 AT2 AT2 AT3 AT2 AT3 AT4 AT2 AT3 AT2 AT3 AT2 AT3	Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6 Map 4 PSh 1/2 Pro 8 Mul 1/2 3-D 6 PNo 7 CTr 4 Equ EP PNo EP Ref 1/2
1660 1662 1663 1665 1666 1667 1668 1669 1670 1671 1672 1673 1675 1676 1677	The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box) Soma Solids HCF and LCM Board Order Pythagorean Triples Proof by Contradiction	AT2 AT2 AT2 AT2 AT2 AT3 AT2 AT3 AT4 AT2 AT3 AT2 AT3 AT2 AT3	Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6 Map 4 PSh 1/2 Pro 8 Mul 1/2 3-D 6 PNo 7 CTr 4 Equ EP PNo EP 3-D EP
1660 1662 1663 1665 1666 1667 1668 1669 1670 1671 1672 1673 1675 1676 1677	The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box) Soma Solids HCF and LCM Board Order Pythagorean Triples Proof by Contradiction Spheres Reflect-a-Bug Folding	AT2 AT2 AT2 AT2 AT2 AT3 AT2 AT3 AT4 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT3	Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6 Map 4 PSh 1/2 Pro 8 Mul 1/2 3-D 6 PNo 7 CTr 4 Equ EP PNo EP 3-D EP Ref 1/2 PSh EP
1660 1662 1663 1665 1666 1667 1668 1670 1671 1672 1673 1675 1676 1677	The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box) Soma Solids HCF and LCM Board Order Pythagorean Triples Proof by Contradiction Spheres Reflect-a-Bug Folding Number Jumble	AT2 AT2 AT2 AT2 AT2 AT3 AT2 AT3 AT4 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT3 AT3 AT3	Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6 Map 4 PSh 1/2 Pro 8 Mul 1/2 3-D 6 PNo 7 CTr 4 Equ EP PNo EP 3-D EP Ref 1/2 PSh EP Alg 8
1660 1662 1663 1665 1666 1667 1668 1670 1671 1672 1673 1675 1676 1680 1681 1682 1683	The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box) Soma Solids HCF and LCM Board Order Pythagorean Triples Proof by Contradiction Spheres Reflect-a-Bug Folding Number Jumble A Square Puzzle (box)	AT2 AT2 AT2 AT2 AT2 AT3 AT2 AT3 AT4 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT3 AT3 AT3	Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6 Map 4 PSh 1/2 Pro 8 Mul 1/2 3-D 6 PNo 7 CTr 4 Equ EP PNo EP 3-D EP Ref 1/2 PSh EP Alg 8 Div 3
1660 1662 1663 1665 1666 1667 1668 1670 1671 1672 1673 1675 1676 1677	The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box) Soma Solids HCF and LCM Board Order Pythagorean Triples Proof by Contradiction Spheres Reflect-a-Bug Folding Number Jumble	AT2 AT2 AT2 AT2 AT2 AT3 AT2 AT3 AT4 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT3 AT3 AT3	Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6 Map 4 PSh 1/2 Pro 8 Mul 1/2 3-D 6 PNo 7 CTr 4 Equ EP PNo EP 3-D EP Ref 1/2 PSh EP Alg 8
1660 1662 1663 1665 1666 1667 1668 1670 1671 1672 1673 1675 1676 1680 1681 1682 1683	The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box) Soma Solids HCF and LCM Board Order Pythagorean Triples Proof by Contradiction Spheres Reflect-a-Bug Folding Number Jumble A Square Puzzle (box)	AT2 AT2 AT2 AT2 AT2 AT3 AT2 AT3 AT4 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT3 AT3 AT3	Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6 Map 4 PSh 1/2 Pro 8 Mul 1/2 3-D 6 PNo 7 CTr 4 Equ EP PNo EP 3-D EP Ref 1/2 PSh EP Alg 8 Div 3
1660 1662 1663 1665 1666 1667 1668 1670 1671 1672 1673 1675 1676 1677 1680 1681 1682 1683 1684 1685	The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box) Soma Solids HCF and LCM Board Order Pythagorean Triples Proof by Contradiction Spheres Reflect-a-Bug Folding Number Jumble A Square Puzzle (box) A Problem of Power Milk Crate	AT2 AT2 AT2 AT2 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3	Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 4 PSh 1/2 Pro 8 Mul 1/2 3-D 6 PNo 7 CTr 4 Equ EP PNo EP 3-D EP Ref 1/2 PSh EP Alg 8 Div 3 P&R 8 L&S 6
1660 1662 1663 1665 1666 1667 1668 1670 1671 1672 1673 1675 1676 1677 1680 1681 1682 1683 1684 1685 1686	The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box) Soma Solids HCF and LCM Board Order Pythagorean Triples Proof by Contradiction Spheres Reflect-a-Bug Folding Number Jumble A Square Puzzle (box) A Problem of Power Milk Crate Square	AT2 AT2 AT2 AT2 AT3 AT2 AT3 AT4 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3	Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 4 PSh 1/2 Pro 8 Mul 1/2 3-D 6 PNo 7 CTr 4 Equ EP PNo EP 3-D EP Ref 1/2 PSh EP Alg 8 Div 3 P&R 8 L&S 6 A&P 7
1660 1662 1663 1665 1666 1667 1668 1669 1670 1671 1672 1673 1675 1676 1677 1679 1680 1681 1682 1683 1684 1685 1686 1687	The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box) Soma Solids HCF and LCM Board Order Pythagorean Triples Proof by Contradiction Spheres Reflect-a-Bug Folding Number Jumble A Square Puzzle (box) A Problem of Power Milk Crate Square Change	AT2 AT2 AT2 AT2 AT3 AT2 AT3 AT4 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT3 AT2 AT3 AT4	Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 4 PSh 1/2 Pro 8 Mul 1/2 3-D 6 PNo 7 CTr 4 Equ EP PNo EP 3-D EP Ref 1/2 PSh 8 Div 3 P&R 8 L&S 6 A&P 7 Add 3
1660 1662 1663 1665 1666 1667 1668 1670 1671 1672 1673 1675 1676 1677 1680 1681 1682 1683 1684 1685 1686	The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box) Soma Solids HCF and LCM Board Order Pythagorean Triples Proof by Contradiction Spheres Reflect-a-Bug Folding Number Jumble A Square Puzzle (box) A Problem of Power Milk Crate Square Change Square Jigsaw (box)	AT2 AT2 AT2 AT2 AT3 AT2 AT3 AT4 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3	Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 4 PSh 1/2 Pro 8 Mul 1/2 3-D 6 PNo 7 CTr 4 Equ EP PNo EP 3-D EP Ref 1/2 PSh EP Alg 8 Div 3 P&R 8 L&S 6 A&P 7
1660 1662 1663 1665 1666 1667 1668 1669 1670 1671 1672 1673 1675 1676 1677 1679 1680 1681 1682 1683 1684 1685 1686 1687	The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box) Soma Solids HCF and LCM Board Order Pythagorean Triples Proof by Contradiction Spheres Reflect-a-Bug Folding Number Jumble A Square Puzzle (box) A Problem of Power Milk Crate Square Change	AT2 AT2 AT2 AT2 AT3 AT2 AT3 AT4 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT3 AT2 AT3 AT4	Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 4 PSh 1/2 Pro 8 Mul 1/2 3-D 6 PNo 7 CTr 4 Equ EP PNo EP 3-D EP Ref 1/2 PSh 8 Div 3 P&R 8 L&S 6 A&P 7 Add 3
1660 1662 1663 1665 1666 1667 1668 1669 1670 1671 1672 1673 1675 1676 1677 1679 1680 1681 1682 1683 1684 1685 1686 1687 1688	The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box) Soma Solids HCF and LCM Board Order Pythagorean Triples Proof by Contradiction Spheres Reflect-a-Bug Folding Number Jumble A Square Puzzle (box) A Problem of Power Milk Crate Square Change Square Jigsaw (box) Fraction Flags	AT2 AT2 AT2 AT2 AT3 AT2 AT3 AT4 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT3 AT2 AT3 AT3 AT2 AT3	Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 4 PSh 1/2 Pro 8 Mul 1/2 3-D 6 PNo 7 CTr 4 Equ EP PNo EP 3-D EP Ref 1/2 PSh EP Alg 8 Div 3 P&R 8 L&S 6 A&P 7 Add 3 CTr 8
1660 1662 1663 1665 1666 1667 1668 1669 1670 1671 1672 1673 1675 1676 1680 1681 1682 1683 1684 1685 1686 1687 1688 1689 1690	The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box) Soma Solids HCF and LCM Board Order Pythagorean Triples Proof by Contradiction Spheres Reflect-a-Bug Folding Number Jumble A Square Puzzle (box) A Problem of Power Milk Crate Square Change Square Jigsaw (box) Fraction Flags Logical Kitty	AT2 AT2 AT2 AT2 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT4	Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6 Ang 6 Map 1/2 Pro 8 Mul 1/2 3-D 6 PNo 7 CTr 4 Equ EP PNo EP 3-D EP Ref 1/2 PSh EP Alg 8 Div 3 P&R 8 L&S 6 A&P 7 Add 3 CTr 8 Fra 5 Pro 4
1660 1662 1663 1665 1666 1667 1668 1669 1670 1671 1672 1673 1675 1676 1677 1680 1681 1682 1683 1684 1685 1686 1687 1688	The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box) Soma Solids HCF and LCM Board Order Pythagorean Triples Proof by Contradiction Spheres Reflect-a-Bug Folding Number Jumble A Square Puzzle (box) A Problem of Power Milk Crate Square Change Square Jigsaw (box) Fraction Flags	AT2 AT2 AT2 AT2 AT3 AT2 AT3 AT4 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT3 AT4 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT3 AT2 AT3 AT3 AT3 AT2 AT3 AT3 AT3 AT3 AT3 AT3 AT3 AT3 AT3 AT3	Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6 Ang 4 PSh 1/2 Pro 8 Mul 1/2 3-D 6 PNo 7 CTr 4 Equ EP PNo EP 3-D EP Ref 1/2 PSh EP Alg 8 Div 3 P&R 8 L&S 6 A&P 7 Add 3 CTr 8 Fra 5
1660 1662 1663 1665 1666 1667 1668 1670 1671 1672 1673 1675 1676 1680 1681 1682 1683 1684 1685 1686 1687 1688 1689 1690 1691	Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box) Soma Solids HCF and LCM Board Order Pythagorean Triples Proof by Contradiction Spheres Reflect-a-Bug Folding Number Jumble A Square Puzzle (box) A Problem of Power Milk Crate Square Change Square Jigsaw (box) Fraction Flags Logical Kitty Predict (PROP/NO)	AT2 AT2 AT2 AT2 AT3 AT2 AT3 AT4 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT4 AT3 AT4 AT3 AT2 AT3 AT4 AT3 AT2 AT3 AT4 AT3 AT4 AT5 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7	Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6 Map 4 PSh 1/2 Pro 8 Mul 1/2 3-D 6 PNo 7 CTr 4 Equ EP PNo EP 3-D EP Ref 1/2 PSh EP Alg 8 Div 3 P&R 8 L&S 6 A&D 7 Add 3 CTr 8 Fra 5 Pro 4 PaG 7
1660 1662 1663 1665 1666 1667 1668 1670 1671 1672 1673 1675 1676 1680 1681 1682 1683 1684 1685 1686 1687 1688 1689 1690 1691	The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box) Soma Solids HCF and LCM Board Order Pythagorean Triples Proof by Contradiction Spheres Reflect-a-Bug Folding Number Jumble A Square Puzzle (box) A Problem of Power Milk Crate Square Change Square Jigsaw (box) Fraction Flags Logical Kitty Predict (PROP/NO) Car Trial Results	AT2 AT2 AT2 AT2 AT3 AT2 AT3 AT4 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT4 AT2 AT3 AT2 AT3 AT4 AT3 AT4 AT3 AT2 AT3 AT4 AT3 AT4 AT5 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7	Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6 Map 4 PSh 1/2 Pro 8 Mul 1/2 3-D 6 PNo 7 CTr 4 Equ EP PNo EP Alg B Div 3 P&R 8 L&S 6 A&D 7 Add 3 CTr 8 Fra 5 Pro 4 PaG 7 Rat 6
1660 1662 1663 1665 1666 1667 1668 1670 1671 1672 1673 1675 1676 1687 1680 1681 1682 1683 1684 1685 1686 1687 1688 1689 1690 1691	The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box) Soma Solids HCF and LCM Board Order Pythagorean Triples Proof by Contradiction Spheres Reflect-a-Bug Folding Number Jumble A Square Puzzle (box) A Problem of Power Milk Crate Square Change Square Jigsaw (box) Fraction Flags Logical Kitty Predict (PROP/NO) Car Trial Results Motor Cycle Ratios	AT2 AT2 AT2 AT2 AT3 AT2 AT3 AT4 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT4 AT3 AT2 AT4 AT2 AT3 AT2 AT4 AT3 AT2 AT3 AT4 AT3 AT4 AT4 AT5 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7	Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6 Ang 4 PSh 1/2 Pro 8 Mul 1/2 3-D 6 PNo 7 CTr 4 Equ EP PNo EP 3-D EP Ref 1/2 PSh EP Alg B Div 3 P&R 8 L&S 6 A&P 7 Add 3 CTr 8 Fra 5 Pro 4 PaG 7 Rat 6 UGr 8
1660 1662 1663 1665 1666 1667 1668 1670 1671 1672 1673 1675 1676 1677 1680 1681 1682 1683 1684 1685 1686 1687 1688 1689 1690 1691	The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box) Soma Solids HCF and LCM Board Order Pythagorean Triples Proof by Contradiction Spheres Reflect-a-Bug Folding Number Jumble A Square Puzzle (box) A Problem of Power Milk Crate Square Change Square Jigsaw (box) Fraction Flags Logical Kitty Predict (PROP/NO) Car Trial Results Motor Cycle Ratios Identikit	AT2 AT2 AT2 AT2 AT3 AT2 AT3 AT4 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT4 AT2 AT3 AT2 AT3 AT4 AT3 AT4 AT3 AT2 AT3 AT4 AT3 AT4 AT5 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7	Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6 Map 4 PSh 1/2 Pro 8 Mul 1/2 3-D 6 PNo 7 CTr 4 Equ EP PNo EP Alg B Div 3 P&R 8 L&S 6 A&D 7 Add 3 CTr 8 Fra 5 Pro 4 PaG 7 Rat 6
1660 1662 1663 1665 1666 1667 1668 1670 1671 1672 1673 1675 1676 1687 1680 1681 1682 1683 1684 1685 1686 1687 1688 1689 1690 1691	The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box) Soma Solids HCF and LCM Board Order Pythagorean Triples Proof by Contradiction Spheres Reflect-a-Bug Folding Number Jumble A Square Puzzle (box) A Problem of Power Milk Crate Square Change Square Jigsaw (box) Fraction Flags Logical Kitty Predict (PROP/NO) Car Trial Results Motor Cycle Ratios	AT2 AT2 AT2 AT2 AT3 AT2 AT3 AT4 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT4 AT3 AT2 AT4 AT2 AT3 AT2 AT4 AT3 AT2 AT3 AT4 AT3 AT4 AT4 AT5 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7	Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6 Ang 4 PSh 1/2 Pro 8 Mul 1/2 3-D 6 PNo 7 CTr 4 Equ EP PNo EP 3-D EP Ref 1/2 PSh EP Alg B Div 3 P&R 8 L&S 6 A&P 7 Add 3 CTr 8 Fra 5 Pro 4 PaG 7 Rat 6 UGr 8
1660 1662 1663 1665 1666 1667 1668 1670 1671 1672 1673 1675 1676 1677 1680 1681 1682 1683 1684 1685 1686 1687 1688 1689 1690 1691	The Champion Flea Get to One Largest and Smallest (x+1)² Tower (SENSE/NO) Pilot (MOVE) Mapping Puzzle Sim w/s Find the Fakes Multiplication Jigsaw (box) Soma Solids HCF and LCM Board Order Pythagorean Triples Proof by Contradiction Spheres Reflect-a-Bug Folding Number Jumble A Square Puzzle (box) A Problem of Power Milk Crate Square Change Square Jigsaw (box) Fraction Flags Logical Kitty Predict (PROP/NO) Car Trial Results Motor Cycle Ratios Identikit	AT2 AT2 AT2 AT2 AT3 AT2 AT3 AT4 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT4 AT3 AT2 AT4 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT5 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7	Rat 7 Mix 5 PV/N 3 Alg 7 Fra 6 Ang 6 Ang 4 PSh 1/2 Pro 8 Mul 1/2 3-D 6 PNo 7 CTr 4 Equ EP PNo EP Alg B Div B Div B Alg 7 Add 3 CTr 8 Fra 5 Pro 4 PaG 7 Rat 6 UGr 8 PSh 5

1700	Fitting	AT3	Sha	3
1701	Posthalf (poster)	O.R.		
1702 1703	Circle (INVEST) Find the Uncle w/s	ReP. AT4	L&S	3
1704	Combined Probability	AT4	Pro	8
				_
1706	Think Craph Matching	AT4 AT2	L&S	7 8
1707 1708	Graph Matching Factor (PROP/NO)	AT2	Gra PNo	6
1709	Ratio Problems	AT2	Rat	6
1710	Pencils	AT2	Rat	4
1711	Missing Digits w/s	AT2	Mix	6
1712	Four Signs w/s	AT2	Mix	7
1713	Sub-zero	AT2	Sub	4
1714	Queens (MOVE Pg 33)	AT3	Tr/V	6
1715	Locate (COORD)	AT3	Coo	6
1716	Unibond Mixtures	AT2	Rat	7
1717	Add-a-Square w/s	AT3	Ref	5 5
1718 1719	Line Symmetry A 1-4 (DIME) Line Symmetry A 5-10 (DIME)	AT3 AT3	Ref Ref	6
1720	Centicube Surprise	AT3	SAV	5
1721	Angle 90°(ANGLE)	AT3	Ang	4
1722	How Many Cubes?	ETA	SAV	1/2
1723	Getting Closer	AT2	Div	6
1724	Digit Division	AT2	Dec	6
1725	Closest Product	AT2	Mul	6
1726	Dividing Pairs	AT2	Div	6
1727	Point Circles	AT2	PNo	5
1728	BoxD (SENSE/NO) Minimax(SENSE/NO & DfEE)	AT2	Dec PV/N	5 5
1729 1730	Wall (SENSE/NO)	AT2 AT2	Fra	4
1731	Rose (INVEST)	AT2	PaG	6
1732	3-D Maze (MOVE)	AT3	3-D	6
1733	An Even Code w/s	AT2	Map	3
1734	An Islamic Design w/s	AT4	L&S	7
1735	Centimetres	AT3	Mea	1/2
1736	Algebra Pairs	AT2	Alg	8
1737	Route Six	AT2	Fra	6
1738	Calcumaze	AT2	Mul	6
1740	About How Much?	AT3	Mea	4
1741	Make Half	AT3	A&P	5
1742	The Game of 20	AT2	Mul	6
1743	Decimal Products	AT2	Dec	5
1744	Yes/No	AT3	PSh	6
1745	Identify (PROP/NO)	AT2	PNo	5
1746	Define (PROP/NO)	AT2	PNo	6
1747	Darts (NUM)	AT2	Sub	4
1749	Decimal Jigsaw	AT2	Dec	5
1750	Layers	AT3	SAV	4
1751	Decimal Lists	AT2	Dec	4
1752	Under a Magnifying Glass	AT2	Rat	5
1753	Matching Pairs w/s	AT3	Mea	4
1754	Chinese Number Puzzle (box)	AT2	PV/N	6
1755	Hopslide (MATH PUZ)	AT4	L&S	4
1756	Tadpoles (MATH PUZ)	AT2	PaG	4
1757 1758	Airline Networks Co-ordinate Messages w/s	AT3 AT3	Top Coo	5 3
1759	Shapes That Can Grow w/s	AT3	S/En	6
1760	One Straight Cut w/s	AT3	Sha	6
1761	Gelosia Problems w/s	AT2	Mul	6
1762	From A to B	AT3	Trig	7
1763	Circles Triangles and Hexagons	AT3	CiM	EΡ
1764	Tangled Quadrilaterals	AT3	PSh	6
1765	Two by Two	AT3	3-D	3
1766	Flying Engineers	AT4	L&S	7 5
1767 1768	Addsupto (NUM) Zig Zags w/s	AT2 AT3	Add Mea	3
. 55	_ gg •	5		-
1770	The Lewis Family	AT4	L&S	6
1771	Early Egyptian Fractions	AT2	Fra	7
1772	Four Triangles	AT3	PSh	6
1773	Two Triangles	AT3	PSh	6
1774	Modelling with Graphs	AT2	UGr	8
1775	Partners	AT2	Alg	EP
1776 1777	Spirals (INVEST) Avoid Each Other (MOVE Pg 30)	ReP. AT3	Tr/V	7
1778	Jumping (MATH PUZ)	AT2	PaG	6
1779	Lineover (GRAPH)	AT2	Gra	ΕP
	, ,			
1782	To be Continued	AT2	Mul	5
1783	Calculating Booklet	O.R.	- .	
1784	Big Wheel	AT3	Trig PaG	EP 7
1785 1786	Invest, Queens (MOVE Pg 32) Which Number?	AT2 AT2	PaG PV/N	7 5
1786 1787	Angle 360° (ANGLE)	AT3	Ang	5 5
1788	Blocked (poster)	AT4	L&S	8
1790	The Chinese Triangle	AT2	PaG	7
1791	Getting Into Shape (box)	AT3	PSh	4
1792	Feeling Hungry?	AT4	DDa	5
1793	Cuneiform Numbers	AT2	PV/N	
1794 1795	Building Cubes Identical Halves w/s	AT3 AT3	3-D PSh	6 EP
1795 1796	Plotter (GRAPH)	ReP.	1 311	
1798	Quilts (INVEST)	AT2	PaG	6
1799	Boxes w/s	AT2	DNo	4

1800	Gelosia for Decimals	AT2	Dec 7	
1010	Find Four Courses with	ATO	DC+ 0	
1812 1813	Find Four Squares w/s Crossword w/s	AT3 AT2	PSh 3 Mix 3	
1818	Helicopter Photographs	AT2	UGr 7	
	3			
1820	Parallels (GRAPH)	AT2	Gra 7	
1821	Overtaking	AT2	UGr 7	
1822	Product of Primes	AT2	Mul 7	
1004	Silver Francis - a vole	AT0	400 4	
1824	Silver Earrings w/s	AT3	A&P 4	
1825 1826	Exactly Ten y=mx (GRAPH)	AT2 AT2	Add 4 Gra 6	
1020	y-mx (GHAFTI)	AIZ	Gia 0	
1828	Find the Shape w/s	АТЗ	PSh 3	
1830	The 'Smoothing Out' Principle	AT2	UGr 8	
1832	Minimum Information	АТЗ	Dra EP	
1833	Magic (NUM)	AT2	Mix 6	
1834	Tenners (NUM)	AT2	Dec 5	
183 5	Magnify (SENSE/NO)	AT2	PV/N 5	
1836	3 in a Line (COORD)	АТЗ	Coo 6	
1839	Which Card is Missing?	AT4	L&S 1/2	
1840	Point And Lines (GRAPH)	AT2	Gra EP	
1841	Interlocking Squares (DIME)	AT3	PSh 1/2	
1842	Shapes Jigsaw (DIME)	STA	PSh 1/2	
1843	Polygons and Right Angles	AT3	PSh 8	
1844	Straight Lines w/s	AT3	Dra 4	
1845	Shading Strips	AT4	Pro 4	
1847	Symmetrical Triangles w/s	AT3	Ref 4	
1848	Three by Three	AT4	L&S 4	
1849	100 Search w/s	AT2	Add 3	
1851	Regions (GRAPH)	ReP.		
1852	Foxes & Chickens (GRAPH)	AT2	UGr EP	
1853	Pinball (INVEST)	ReP.		
1855	Quadratic Mappings (DIME)	AT2	Map 7	
1856	What Shapes? w/s	AT3	PSh 1/2	
1857	The Other Side	AT3	3-D 8	
1858	Bengali 🍣 Piece Puzzle (box)	AT2	PV/N 5	
1861	Dipsticks	AT3	SAV 7	
1862	Even Animal w/s	AT2	PNo 1/2	
1866	Mirror Match (DIME)	АТЗ	Ref 5	
1867	Four Cubes	AT3	3-D 1/2	
1868	Symmetry Match w/s	AT3	Ref 1/2	
	-,····, ····			
1872	Back to Back	ATO	3-D 4	
1873		AT3 AT3		
1874	Polygon Symmetries Sevens Out	AT2		
1875	Urdu Multiples	AT2	PV/N 3 PV/N 6	
1876	Fill the Shape (DIME)	AT3	3-D 3	
1877	Add a Cube or Two (DIME)	ETA	3-D 5	
1878	Two Blocks (DIME)	AT3	3-D 4	
1879	Build and Balance (DIME)	AT3	3-D 7	
1880	More than Two Blocks (DIME)	AT3	3-D 6	
1881	Hindi Additions	AT2	PV/N 7	
1882	Wedges 1 (DIME)	AT3	3-D 6 3-D 8	
1883	Wedges 2 (DIME)	AT3	3-D 8	
1885	Optimising	AT3	SAV EP	
1886	World View	STA	A&P 6	
4000	Denview Title 4 (DISAF)	4-	Ob	
1889	Regular Tilings 1 (DIME)	AT3	Sha 5	
1890	Regular Tilings 2 (DIME)	AT3	Sha 6	
1891	Regular Tilings 3 (DIME)	AT3	Sha 6	
1892	Line Symmetry B 1-3 (DIME)	AT3	Ref 5	
1893	Line Symmetry B 4-6 (DIME)	AT3	Ref 7	
1894	Line Symmetry B 7-10 (DIME)	AT3	Ref 7	
1896	Spatial Reasoning (DIME)	АТЗ	Sha 4	
1897	Who is the Schoolkeeper?	AT4	L&S 5	
1898	Who has the Microcomputer?	AT4	L&S 7	
1899	Number Words	AT2	PaG 3	

1902	Short, Middle, Long	AT3	Trig	6
1903	Numbers (PROP/NO)	ReP	_	
1904	Find the Operation w/s	AT2	Alg	7
1905	Sorting Triangles	AT3	S/En	4
1907	About How Long? w/s	АТ3	Mea	3
1908	Pattern Pack A (DIME)	AT3	CTr	1/2
1909	Pattern Pack B (DIME)	AT3	CTr	1/2
,000	Talletti Taok D (Bittle)	,,,,	01.	.,_
1911	Dissection Pairs w/s	АТЗ	Sha	7
1912	Painted Tyres	AT3	Dra	7
1913	Bengali Numbers	AT2	PV/N	5
1914	Adding Counters w/s	AT3	Ref	5
1010	A.Damina Trials	ATO	F~	
1916	A Domino Trick	AT2	Equ Trig	8 7
1917	Rising Gradients	AT3	-	
1918	The Coin Problem	AT4	L&S	EP
1919	How many Cm Squares? w/s	AT3	A&P	1/2
1920	Pattern Spotting (PROP/NO Pg 16		PNo	3
1921	Trig Lines	AT3	Trig	8
1922	Matrices and Area	АТЗ	S/En	EP
1927	Pentomino Puzzles	АТЗ	A&P	5
1928	Four Pentominoes	AT3	S/En	7
1929	Nine Pentominoes	AT3	S/En	8
1931	Which Scripts? (poster)	AT2	PV/N	6
1934	Translations	АТЗ	Tr/V	7
1935	Angles in a Semi-circle	AT3	APr	7
1936	Many Grids (PROP/NO Pg 25)	AT2	PaG	5
1937	Panjabi Numbers	AT2	PV/N	7
1938	Olympic Medals	AT4	DDa	6
1939	Sin and Cos Graphs	АТЗ	Trig	ΕP
1940	Dividing Investigation	AT2	Div	6
1941	Differences	AT2	Seq	8
1942	Growing Patterns w/s	AT3	Dra	1/2
	-			
1945	Square Diagonals w/s	AT2	Seq	3
1946	A Problem of Division	AT2	Div	5
1947	3-D Frameworks	AT3	Top	6
1948	$y = ax^2$	AT2	Gra	7
1949	Compass Game	ΑТЗ	Rot	3
1950	Diagonal Multiples (PROP/NO Pg 26)	AT2	PNo	7
1951	When x is?	AT2	Gra	8
1952	Reciprocal Graphs	AT2	Gra	8
1953	Sets of Signs	AT4	L&S	6
1954	Line Symmetry	AT3	Ref	5
1955	Rotational Symmetry	ETA	Rot	6
1956	Thinking and Braking	AT2	UGr	8
1958	Ealing Broadway	АТЗ	Тор	6
1959	Making One w/s	AT2	Fra	3
				•
1961	One Million (TARQUIN Poster)	AT2	Mix	6
1966	Curve Stitching (TARQUIN Poster)	O.R.		
1967	One Dice (DIME)	AT4	Pro	6
1968	Numbers Up (DIME)	AT4	Pro	7
1969	Two Dice (DIME)	AT4	Pro	6
1970	Five Beads (DIME)	AT4	Pro	7
1971	Seven Beads (DIME)	AT4	Pro	8
1999	Equiangular Spirals	AT3	Ang	7

2000	Fibonacci & Square Root Spirals	AT2	P&R	8
2002 2003 2004	Real Spirals Birthday Dates 54% is a little more than Half Marks	O.R. AT2 AT2	Add Per	1/2 6
2006	A Mountain Walk	AT2	Rat	7
2008 2009 2010 2011 2012 2013 2014	Curves of Pursuit (TARQUIN P) Three Counters (DIME) Six Beads (DIME) Four Beads (DIME) Tessellating Patterns (TARQUIN P Round the Bend Probably Probable? (INVESTPg 4:	AT3	Pro Pro Pro Sha CiM Pro	6 5 6 6 EP
2016 2017 2018 2019 2020	Target 24 - a 3 Digit Problem Fair Play Drawing the Curve Power Match w/s High Powered Matching w/s	AT2 AT4 AT2 AT2 AT2	Mix Pro Gra P&R P&R	8 4 7 6 7
2022 2023 2024	Fewest Keys Alphabet Symmetry w/s Excess Luggage	AT2 AT3 AT2	Mix CTr Per	6 5 7
2027 2028 2029	Similar Triangles Integer Graphs Strings	AT3 AT2 AT2	S/En Gra Seq	8 EP 8
2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044	Spiralling Squares Patterns DIY Earrings Is it True? Likely or unlikely? Symmetry Codes w/s Fabric Designs 3 in 1 Maze (poster) Percentage Problems Finding Equivalent Fractions x* Experiment Going Scientific Ans and Exe Unit Fraction Patterns Matching Graphs	AT3 AT4 AT4 AT3 AT3 AT4 AT2 AT2 AT2 AT2 AT2 AT2 AT2	Dra CiM CDa Pro Ref CiM L&S Per Fra P&R P&R Seq Fra Gra	7 8 5 5 5 EP 4 EP 5 7 8 7 EP
2045	Hot and Cold w/s Pegs in Squares	AT2	DNo P&R	4
2049 2050 2051 2052 2053 2054 2055 2056	Unpredictable Patterns? Vector Areas The Log Button Pythagoras Dissection Odd Add Four Sides Ellipses by Folding Surrounding Right Angled Tris w/s	AT2 AT3 AT2 AT2 AT2 AT3 AT3	Seq Tr/V Mix Rat Add PSh Dra Trig	8 EP EP 8 5 3 7 6
2058 2059 2060 2061 2062 2063 2064 2065	Tie w/s Domino Patterns Kit Bag Convince Yourself Angles in Circles Islamic Designs Russian Multiplication Shrinking Earth	AT3 AT2 AT3 AT2 AT3 AT3 AT2 AT2	Dra Map CiM Mix APr Dra Mul Rat	7 5 6 7 8 5 7
2067	Jeans	AT2	Rat	7
2069 2070 2071 2072 2073 2074 2075 2076 2077 2078 2079	Turn it Over! Card Towers Half a Cuboid Nepali Numbers Tricubes (DIME) Building with Tricubes (DIME) Tricube Plans (DIME) Building on a Square (DIME) Making a 3 x 3 x 3 Cube (DIME) Fibonacci-type Sequences A Sketchy Activity	AT4 AT2 AT3 AT2 AT3 AT3 AT3 AT3 AT3 AT2 AT2	L&S Seq 3-D Mix 3-D 3-D 3-D 3-D Seq Gra	8 6 4 5 5 6 6 7 8
2081 2082 2083 2084 2085 2086	Inventing Mazes Opposite, Adjacent & Hypotenuse All about Circles Polygon Areas Scale Maps Circles to Polygons (INVEST Pg 10)	AT4 AT3 AT3 AT3 AT3 AT2	L&S Trig CiM A&P CTr PaG	6 8 5 7 EP 4
2088 2089 2090	What's the Difference? w/s Oxford Street w/s Black & Red Triangle Patterns	AT4 AT3 AT2	L&S Top PNo	5 1/2 5
2092 2093 2094 2095 2096 2097	What's Recurring? Islamic Patterns in Logo Squares (INVEST Pg 4) Squares, Cubes and Roots w/s Fraction Playing Cards Fraction Families	AT2 AT3 AT2 AT2 O.R. AT2	Fra CTr PNo P&R Fra	EP EP 3 6

2100 2101														
2101	Putting it to the test	AT4	Pro	7	2200	Pie Charts for Breakfast	AT4	DDa	5	2300	Fraction Bingo	AT2	Fra	5
	Logiblock Sets	AT4	L&S	7	2201	Vectors and Squares	AT3	Tr/V	7	. 2301	Sim Equations from Graphs	AT2	Gra	7
				_	2202	Visiting Every Point (INVEST Pg 8		PNo	5	2302	Bearings	AT3	Ang	5
2103	Circle Packing	AT3	CiM	8.	2203	Algebra Match w/s	AT2	Alg	7	2303	Hundred Fit (box) Favourite Ice Cream	AT2 AT4	Seq AlDa	4
2105	Equal Fraction Pairs	AT2	Fra	3	2205	Making 25p	AT2	Add	1/2	2305	Hexagon Puzzle w/s	AT2	PV/N	
2106	Party Solutions	AT2	UGr	EP	2206	Exploring Sine Curves	AT3	Trig	EP	2306	Patterns on a Line w/s	AT3	CTr	
2107	Oxfam Collection w/s	AT2	Add	4	2207	Pinball Experiments	AT4	Pro	7	2307	Triangle Sums Game	AT2	Add	
					2208	Best Marks	AT4	AlDa	7	2308	Word Match w/s	AT3	PSh	
2109	Another Trig Line	AT3	Trig	8	2209	Short Orders	AT2	Alg	5	2309	Rangoli Patterns	AT3	Ref	5
2110	Number Sort w/s	AT2	PV/N	1/2	2210	Handspan	AT4	AlDa	3	2310	Sequences Jigsaw w/s Start with 60°	AT2 AT3	Seq Dra	4 6
2111	Rotational Symmetry Jigsaws	AT3	Rot	4	2211	Equivalent Expressions w/s	AT2	Alg	7	2312	Number Challenge	AT2	PNo	7
2112	Imaginings (Teacher)	O.R.	N Aire	•	2212	10 Search w/s	AT2	Add	1/2	2313	Turning the Cards	AT4	Pro	3
2113 2114	Mystery (Calculating Pg 3) 2 Puzzles (Calculating Pg 5)	AT2 AT2	Mix Mix	3 4	2213 2214	Sum Message w/s Shape Sequences	AT2 AT3	Mix CTr	1/2 7	2314	Describing Sequences	AT2	Seq	3
2115	Missing Digit (Calculating Pg 8)	AT2	Mix	6	2215	Identicubes	AT2	Alg	8	2315	With a ruler	AT3	Mea	3
2116	Operations (Calculating Pg 9)	AT2	Mix	4	2216	From Matches to Mappings w/s	AT2	Map	5					
2117	Rumour (Calculating Pg 10)	AT4	CDa	6	2217	Magic Circles	AT2	Add	5	2318	A Mean Challenge!	AT4	AlDa	7
2118	Ticket Sales (Calculating Pg 11)	AT2	Mix	4	2218	Origami Dodecahedron	AT3	3-D	7	2319	Pizza or Pasta?	AT4	Pro	4
2119	Patterns (Calculating Pg 12/13)	AT2	Seq	5	2219	Origami Cube	AT3	3-D	5	2320	Patterns in Spirals	AT2	Seq	5
2120	Productive (Calculating Pg 14)	AT2	Mul	5	2220	Trig for any Triangle	AT3	Trig	EP	2321	The Algebra Game	AT2	Alg	6
2121 2122	Hot and Cold (Calculating Pg 15) Target 200 (Calculating Pg 16)	AT4	AlDa Mix	4 5	2221	Jigsaws	AT2 AT3	PaG	5 6	2322	The Algebra Game 2	AT2	Alg	7
2123	Missing Signs (Calculating Pg 17)	AT2	Mix	6	2222 2223	Equal Area? w/s Fractions to Decimals Match w/s	AT2	A&P Dec	6	2323 2324	Statistical Invs Helpbook Reckonings (Teacher)	O.R.		
2124	Date of Birth (Calculating Pg 18/19)		Mix	5	2224	Shajjad's Collection	AT2	Mix	3	2325	Grouped Data, Reviewed	AT4	AlDa	8
2125	Escape (Calculating Pg 20/21)	AT2	PaG	5	2225	Wildlife Collection	AT2	Mix	3	2326	Hanoi (MATH PUZ)	AT2	PaG	7
2126	Problems (Calculating Pg 22/23)	AT2	Or/R	6	2226	Sum Number Cards	O.R.			2327	Hats (MATH PUZ)	AT4	L&S	5
2127	Tricube Codes	AT3	3-D	6	2227	5p a line	AT2	Add	1/2	2328	Quadratic Rules	AT2	Alg	7
2128	Stacking	AT2	PaG	4	2228	Vector Match	AT3	Tr/V	6	2329	The Median	AT4	AlDa	4
2129	Tens and fives w/s	AT2	Mul	3	2229	Quadratics and Primes	AT2	PNo	8	2330	Missing Angles w/s	АТЭ	APr	5
2130	A Disappearing Act	AT2	Mix	EP 3	2230	Which has the Largest Area? w/s		A&P	1/2	2220	Desimals on a Number Line w/s	ΛTΩ	Doo	•
2131 2132	Filing Cards w/s Cutting Corners	AT2 AT3	PV/N 3-D	7	2231 2232	Hexiamonds Cut a Cube	AT3 AT3	PSh 3-D	5 7	2332 2333	Decimals on a Number Line w/s Quiz Times w/s	AT2 AT2	Dec Mul	3
2133	Out of 100 w/s	AT2	Per	3	2233	Cafe Menu	AT2	Mix	1/2	2334	Beat the code	AT2	Alg	5
2134	Similar Rectangles?	AT2	Rat	6	2234	Defining Regions	AT2	Gra	8	2335	Using Decimals	AT2	Dec	3
2135	Grey Areas	AT3	CiM	EP	2235	Headlines	AT4	DDa	6	2336	Comparing Ratios	AT2	Rat	5
2136	What could x be?	AT2	Equ	7	2236	25% of What?	AT2	Per	5	i	· ·			
2137	Using Sine and Cosine 1	ETA	Trig	8	2237	Words Won't Fail Me w/s	AT2	Alg	6	2338	Decimal Search w/s	AT2	Dec	4
2138	Which Hand Works Hardest?	AT4	CDa	6	2238	What is the perimeter?	AT3	A&P	1/2	2339	2 x Table w/s	AT2		1/2
2139	Tricube Symmetries	AT3	Ref	6	2239	Putting in Order w/s	AT2	PV/N	3	2340	3 x Table w/s	AT2	Mul	3
2140	Quadratic Solutions Constructive Designs	AT2	Gra	EP 7	2240	Ask Me Another w/s Cuts to Pieces	AT3	PSh PaG	6 5	2341 2342	4 x Table w/s 5 x Table w/s	AT2 AT2	Mul Mul	3
2141 2142	Making Circles	AT3 AT3	Dra CiM	5	2241 2242	Decimal Flags w/s	AT2 AT2	Dec	6	2342	6 x Table w/s	AT2	Mul	3
2143	Percentages of Money w/s	AT2	Per	4	2243	Who's Rule, Okay?	AT2	Alg	7	2344	7 x Table w/s	AT2	Mul	4
2144	Using Sine and Cosine 2	AT3	Trig	8	2244	Packing Balls	AT3	SAV	ΕP	2345	8 x Table w/s	AT2	Mul	4
2145	Cross Stitch	АТЗ	CTr	7	2245	Rows and Columns	AT2	Add	4	2346	9 x Table w/s	AT2	Mul	3
2146	It's not Fair!	AT3	CiM	4	2246	Sieve of Eratosthenes	AT2	PNo	5	2347	10 x Table w/s	AT2	Mul	3
2147	Odd Animal w/s	AT2	PNo	1/2	2247	More Than, Less Than	AT2	Equ	6	2348	11 x Table w/s	AT2	Mul	3
2148	Transforming Triangles	AT3	CTr	8	2248	Snails' Trails	AT3	Mea	1/2	2349	12 x Table w/s	AT2	Mul	4
2149	Circle Coverage	AT3	CiM	6	2249	Gradients and Intercepts	AT2	Gra	8	2350	End of level Review	AT2/3/		3
2150 2151	Pizza Paradise The Root of the Problem	AT3 AT2	CiM P&R	7 6	2250 2251	A Puzzling Walk (poster) Put them in their Place w/s	AT4 AT2	L&S Mix	6 7	2351 2352	End of level Review End of level Review	AT2/3/ AT2/3/		4 5
2152	How Likely?	AT4	Pro	4	2252	Something and a Half w/s	AT2	Fra	1/2	2353	End of level Review	AT2/3/		6
	TIOW EMORY.					Comeaning and a rian w/s	/ \ \ L		•//-	2000	End of level leview		-	-
	£1 Search w/s	AT2		1/2		Solving Inequalities	AT2		7	2354	End of level Review		4	7
2153 2154	£1 Search w/s Sum Dice	AT2 AT2	Add Mix	1/2 6	2253 2254	Solving Inequalities Calculator Brackets	AT2 AT2	Equ Mix	7 6	2354 2355	End of level Review End of level Review	AT2/3/ AT2/3/		7 8
2153			Add		2253	_ ·		Equ				AT2/3/	4	
2153 2154 2155 2156	Sum Dice Visualising Fraction Squares	AT2	Add Mix	6 5 6	2253 2254 2255 2256	Calculator Brackets	AT2 AT2 AT2	Equ Mix Fra Fra	6 6 3	2355 2356 2357	End of level Review End of level Review Matching Algebraic Exps w/s	AT2/3/ AT2/3/ AT2/3/ AT2	4 4 Alg	8 EP 7
2153 2154 2155 2156 2157	Sum Dice Visualising Fraction Squares Some Sums for your Mind w/s	AT2 AT3 AT2 AT2	Add Mix PSh Fra Mix	6 5 6 7	2253 2254 2255 2256 2257	Calculator Brackets Adding One Matching Fractions w/s Right Angled Triangular Prisms	AT2 AT2 AT2 AT3	Equ Mix Fra Fra SA/V	6 6 3 5	2355 2356 2357 2358	End of level Review End of level Review Matching Algebraic Exps w/s Angle Fit w/s	AT2/3/ AT2/3/ AT2/3/ AT2 AT3	4 4 Alg APr	8 EP 7 4
2153 2154 2155 2156 2157 2158	Sum Dice Visualising Fraction Squares Some Sums for your Mind w/s Turning Green w/s	AT2 AT3 AT2 AT2 AT4	Add Mix PSh Fra Mix L&S	6 5 6 7 1/2	2253 2254 2255 2256 2257 2258	Calculator Brackets Adding One Matching Fractions w/s Right Angled Triangular Prisms Substituting into Formulae	AT2 AT2 AT2 AT3 AT2	Equ Mix Fra Fra SAV Equ	6 3 5 8	2355 2356 2357 2358 2359	End of level Review End of level Review Matching Algebraic Exps w/s Angle Fit w/s Approximate Solutions	AT2/3/ AT2/3/ AT2/3/ AT2 AT3 AT2	4 Alg APr Or/R	8 EP 7 4 5
2153 2154 2155 2156 2157 2158 2159	Sum Dice Visualising Fraction Squares Some Sums for your Mind w/s Turning Green w/s Permutating Tricubes	AT2 AT3 AT2 AT2 AT4 AT4	Add Mix PSh Fra Mix L&S Pro	6 5 6 7 1/2 8	2253 2254 2255 2256 2257	Calculator Brackets Adding One Matching Fractions w/s Right Angled Triangular Prisms	AT2 AT2 AT2 AT3	Equ Mix Fra Fra SA/V	6 6 3 5	2355 2356 2357 2358 2359 2360	End of level Review End of level Review Matching Algebraic Exps w/s Angle Fit w/s Approximate Solutions Rotational & Line Symmetry Review	AT2/3/ AT2/3/ AT2/3/ AT2 AT3 AT2 AT3	Alg APr Or/R CTr	8 EP 7 4 5
2153 2154 2155 2156 2157 2158 2159 2160	Sum Dice Visualising Fraction Squares Some Sums for your Mind w/s Turning Green w/s Permutating Tricubes Folding Fractions	AT2 AT3 AT2 AT2 AT4 AT4 AT2	Add Mix PSh Fra Mix L&S Pro Fra	6 5 6 7 1/2 8 5	2253 2254 2255 2256 2257 2258 2259	Calculator Brackets Adding One Matching Fractions w/s Right Angled Triangular Prisms Substituting into Formulae Multiplication Flags w/s	AT2 AT2 AT2 AT3 AT2 AT2	Equ Mix Fra Fra SAV Equ Alg	6 6 3 5 8 4	2355 2356 2357 2358 2359 2360 2361	End of level Review End of level Review Matching Algebraic Exps w/s Angle Fit w/s Approximate Solutions Rotational & Line Symmetry Review Right-angle or not?	AT2/3/ AT2/3/ AT2/3/ AT2 AT3 AT2 AT3 AT3	Alg APr Or/R CTr Ang	8 FP 7 4 5 5
2153 2154 2155 2156 2157 2158 2159	Sum Dice Visualising Fraction Squares Some Sums for your Mind w/s Turning Green w/s Permutating Tricubes Folding Fractions Shape Names w/s	AT2 AT3 AT2 AT2 AT4 AT4 AT2 AT3	Add Mix PSh Fra Mix L&S Pro	6 5 6 7 1/2 8	2253 2254 2255 2256 2257 2258	Calculator Brackets Adding One Matching Fractions w/s Right Angled Triangular Prisms Substituting into Formulae	AT2 AT2 AT2 AT3 AT2	Equ Mix Fra Fra SAV Equ	6 3 5 8	2355 2356 2357 2358 2359 2360	End of level Review End of level Review Matching Algebraic Exps w/s Angle Fit w/s Approximate Solutions Rotational & Line Symmetry Review	AT2/3/ AT2/3/ AT2/3/ AT2 AT3 AT2 AT3	Alg APr Or/R CTr	8 EP 7 4 5
2153 2154 2155 2156 2157 2158 2159 2160 2161	Sum Dice Visualising Fraction Squares Some Sums for your Mind w/s Turning Green w/s Permutating Tricubes Folding Fractions	AT2 AT3 AT2 AT2 AT4 AT4 AT2	Add Mix PSh Fra Mix L&S Pro Fra PSh	6 5 6 7 1/2 8 5 5	2253 2254 2255 2256 2257 2258 2259	Calculator Brackets Adding One Matching Fractions w/s Right Angled Triangular Prisms Substituting into Formulae Multiplication Flags w/s Shape-Tiles w/s	AT2 AT2 AT3 AT2 AT2 AT2	Equ Mix Fra Fra SA/V Equ Alg	6 6 3 5 8 4	2355 2356 2357 2358 2359 2360 2361 2362	End of level Review End of level Review Matching Algebraic Exps w/s Angle Fit w/s Approximate Solutions Rotational & Line Symmetry Review Right-angle or not? Decimal Routes w/s	AT2/3/ AT2/3/ AT2 AT2 AT3 AT2 AT3 AT3 AT3	Alg APr Or/R CTr Ang Dec	8 EP 7 4 5 5 1/2 5
2153 2154 2155 2156 2157 2158 2159 2160 2161 2162	Sum Dice Visualising Fraction Squares Some Sums for your Mind w/s Turning Green w/s Permutating Tricubes Folding Fractions Shape Names w/s Angles and Triangles	AT2 AT3 AT2 AT2 AT4 AT4 AT2 AT3	Add Mix PSh Fra Mix L&S Pro Fra PSh	6 5 6 7 1/2 8 5 5	2253 2254 2255 2256 2257 2258 2259 2261 2262	Calculator Brackets Adding One Matching Fractions w/s Right Angled Triangular Prisms Substituting into Formulae Multiplication Flags w/s Shape-Tiles w/s Find the Route w/s	AT2 AT2 AT3 AT2 AT2 AT2 AT3 AT2	Equ Mix Fra Fra SA/V Equ Alg Tr/V Mix	6 6 3 5 8 4 1/2 3	2355 2356 2357 2358 2359 2360 2361 2362 2363	End of level Review End of level Review Matching Algebraic Exps w/s Angle Fit w/s Approximate Solutions Rotational & Line Symmetry Review Right-angle or not? Decimal Routes w/s Conversion Pack 1 Decimal Playing Cards Higher Decimal Win	AT2/3/ AT2/3/ AT2 AT2 AT3 AT2 AT3 AT3 AT3 AT2 AT3	Alg APr Or/R CTr Ang Dec Rat	8 EP 7 4 5 5 1/2 5
2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164	Sum Dice Visualising Fraction Squares Some Sums for your Mind w/s Turning Green w/s Permutating Tricubes Folding Fractions Shape Names w/s Angles and Triangles Geometry Facts Information Displayed	AT2 AT3 AT2 AT4 AT4 AT2 AT3 AT3 O.R. AT4	Add Mix PSh Fra Mix L&S Pro Fra PSh APr	6 5 6 7 1/2 8 5 5 6	2253 2254 2255 2256 2257 2258 2259 2261 2262 2263 2264 2265	Calculator Brackets Adding One Matching Fractions w/s Right Angled Triangular Prisms Substituting into Formulae Multiplication Flags w/s Shape-Tiles w/s Find the Route w/s Spreadsheet Squares Plus and Minus Grids w/s Rational Numbers	AT2 AT2 AT3 AT2 AT2 AT2 AT3 AT2 AT2 AT2 AT2	Equ Mix Fra Fra SAV Equ Alg Tr/V Mix Mul Mix PNo	6 6 3 5 8 4 1/2 3 6 3 8	2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366	End of level Review End of level Review Matching Algebraic Exps w/s Angle Fit w/s Approximate Solutions Rotational & Line Symmetry Review Right-angle or not? Decimal Routes w/s Conversion Pack 1 Decimal Playing Cards Higher Decimal Win Decimal Difference	AT2/3/ AT2/3/ AT2/3/ AT2 AT3 AT2 /AT3 AT3 AT2 AT3 O.R. AT2 AT2	Alg APr Or/R CTr Ang Dec Rat Or/R Dec	8 F 7 4 5 5 5 1/2 5 6
2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164	Sum Dice Visualising Fraction Squares Some Sums for your Mind w/s Turning Green w/s Permutating Tricubes Folding Fractions Shape Names w/s Angles and Triangles Geometry Facts Information Displayed Matching Equations	AT2 AT3 AT2 AT4 AT4 AT4 AT3 AT3 O.R. AT4	Add Mix PSh Fra Mix L&S Pro Fra PSh APr DDa	6 5 6 7 1/2 8 5 5 6 5 8	2253 2254 2255 2256 2257 2258 2259 2261 2262 2263 2264 2265 2266	Calculator Brackets Adding One Matching Fractions w/s Right Angled Triangular Prisms Substituting into Formulae Multiplication Flags w/s Shape-Tiles w/s Find the Route w/s Spreadsheet Squares Plus and Minus Grids w/s Rational Numbers Irrational Numbers	AT2 AT2 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2	Equ Mix Fra Fra SA/V Equ Alg Tr/V Mix Mul Mix PNo PNo	6 6 3 5 8 4 1/2 3 6 3 8 EP	2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367	End of level Review End of level Review Matching Algebraic Exps w/s Angle Fit w/s Approximate Solutions Rotational & Line Symmetry Review Right-angle or not? Decimal Routes w/s Conversion Pack 1 Decimal Playing Cards Higher Decimal Win Decimal Difference Sixteen Quadrilaterals	AT2/3/ AT2/3/ AT2/3/ AT2 AT3 AT2 /AT3 AT3 AT2 AT3 O.R. AT2 AT2	Alg APr Or/R CTr Ang Dec Rat Or/R Dec PSh	8P745555565
2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2166 2167	Sum Dice Visualising Fraction Squares Some Sums for your Mind w/s Turning Green w/s Permutating Tricubes Folding Fractions Shape Names w/s Angles and Triangles Geometry Facts Information Displayed Matching Equations Range of Area	AT2 AT3 AT2 AT4 AT4 AT3 AT3 O.R. AT4	Add Mix PSh Fra Mix L&S Pro Fra PSh APr DDa Gra Or/R	6 5 6 7 1/2 8 5 5 6 5 8 8	2253 2254 2255 2256 2257 2258 2259 2261 2262 2263 2264 2265 2266 2267	Calculator Brackets Adding One Matching Fractions w/s Right Angled Triangular Prisms Substituting into Formulae Multiplication Flags w/s Shape-Tiles w/s Find the Route w/s Spreadsheet Squares Plus and Minus Grids w/s Rational Numbers Irrational Numbers Introducing Ratio	AT2 AT2 AT3 AT2 AT2 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT2	Equ Mix Fra Fra SA/V Equ Alg Tr/V Mix Mul Mix PNo PNo Rat	6 6 3 5 8 4 1/2 3 6 3 8 EP 5	2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368	End of level Review End of level Review Matching Algebraic Exps w/s Angle Fit w/s Approximate Solutions Rotational & Line Symmetry Review Right-angle or not? Decimal Routes w/s Conversion Pack 1 Decimal Playing Cards Higher Decimal Win Decimal Difference Sixteen Quadrilaterals Matching Decimals	AT2/3/ AT2/3/ AT2/3/ AT2 AT3 AT2 AT3 AT3 AT2 AT3 O.R. AT2 AT2 AT3 AT2	Alg APr Or/R CTr Ang Dec Rat Or/R Dec PSh Or/R	8 FP 7 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 6 5 5 4
2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2166 2167 2168	Sum Dice Visualising Fraction Squares Some Sums for your Mind w/s Turning Green w/s Permutating Tricubes Folding Fractions Shape Names w/s Angles and Triangles Geometry Facts Information Displayed Matching Equations Range of Area Cube Root Calculator	AT2 AT3 AT2 AT4 AT4 AT3 AT3 O.R. AT4 AT2 AT3 AT3	Add Mix PSh Fra Mix L&S Pro Fra PSh APr DDa Gra Or/R P&R	6 5 6 7 1/2 8 5 5 6 5 8 8 6	2253 2254 2255 2256 2257 2258 2259 2261 2262 2263 2264 2265 2266 2267 2268	Calculator Brackets Adding One Matching Fractions w/s Right Angled Triangular Prisms Substituting into Formulae Multiplication Flags w/s Shape-Tiles w/s Find the Route w/s Spreadsheet Squares Plus and Minus Grids w/s Rational Numbers Irrational Numbers Introducing Ratio Logo is Amazing	AT2 AT2 AT3 AT2 AT2 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2	Equ Mix Fra Fra SAV Equ Alg Tr/V Mix Mul Mix PNo PNo Rat Ang	6 6 3 5 8 4 1/2 3 6 3 8 EP 5	2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2369	End of level Review End of level Review Matching Algebraic Exps w/s Angle Fit w/s Approximate Solutions Rotational & Line Symmetry Review Right-angle or not? Decimal Routes w/s Conversion Pack 1 Decimal Playing Cards Higher Decimal Win Decimal Difference Sixteen Quadrilaterals Matching Decimals Decimal Sort	AT2/3/ AT2/3/ AT2/3/ AT2 AT3 AT2 AT3 AT3 AT2 AT3 O.R. AT2 AT2 AT3 AT2 AT3	Alg APr Or/R CTr Ang Dec Rat Or/R Dec PSh Or/R Dec	8 F 7 4 5 5 5 5 5 5 5 5 5 5 5 6 5 4 4 4 4 4 4
2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2166 2167 2168 2169	Sum Dice Visualising Fraction Squares Some Sums for your Mind w/s Turning Green w/s Permutating Tricubes Folding Fractions Shape Names w/s Angles and Triangles Geometry Facts Information Displayed Matching Equations Range of Area Cube Root Calculator Pop of Britain 1880 and 1980	AT2 AT3 AT2 AT4 AT4 AT3 AT3 O.R. AT4 AT2 AT3 AT4	Add Mix PSh Fra Mix L&S Pro Fra PSh APr DDa Gra Or/R P&R DDa	6 5 6 7 1/2 8 5 5 6 5 8 8	2253 2254 2255 2256 2257 2258 2259 2261 2262 2263 2264 2265 2266 2267 2268 2269	Calculator Brackets Adding One Matching Fractions w/s Right Angled Triangular Prisms Substituting into Formulae Multiplication Flags w/s Shape-Tiles w/s Find the Route w/s Spreadsheet Squares Plus and Minus Grids w/s Rational Numbers Irrational Numbers Introducing Ratio Logo is Amazing Amazing Logo	AT2 AT2 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT3	Equ Mix Fra Fra SAV Equ Alg Tr/V Mix Mul Mix PNo PNo Rat Ang Ang	6 6 3 5 8 4 1/2 3 6 3 8 EP 5	2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2369 2370	End of level Review End of level Review Matching Algebraic Exps w/s Angle Fit w/s Approximate Solutions Rotational & Line Symmetry Review Right-angle or not? Decimal Routes w/s Conversion Pack 1 Decimal Playing Cards Higher Decimal Win Decimal Difference Sixteen Quadrilaterals Matching Decimals Decimal Sort Conversion Pack 2	AT2/3/ AT2/3/ AT2/3/ AT2 AT3 AT2 AT3 AT2 AT3 O.R. AT2 AT2 AT3 AT2 AT2 AT3	Alg APr Or/R CTr Ang Dec Rat Or/R Dec PSh Or/R Dec Rat	8P7455255565446
2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2166 2167 2168	Sum Dice Visualising Fraction Squares Some Sums for your Mind w/s Turning Green w/s Permutating Tricubes Folding Fractions Shape Names w/s Angles and Triangles Geometry Facts Information Displayed Matching Equations Range of Area Cube Root Calculator	AT2 AT3 AT2 AT4 AT4 AT3 AT3 O.R. AT4 AT2 AT3 AT3	Add Mix PSh Fra Mix L&S Pro Fra PSh APr DDa Gra Or/R P&R	6 5 6 7 1/2 8 5 5 6 5 8 8 6 7	2253 2254 2255 2256 2257 2258 2259 2261 2262 2263 2264 2265 2266 2267 2268	Calculator Brackets Adding One Matching Fractions w/s Right Angled Triangular Prisms Substituting into Formulae Multiplication Flags w/s Shape-Tiles w/s Find the Route w/s Spreadsheet Squares Plus and Minus Grids w/s Rational Numbers Irrational Numbers Introducing Ratio Logo is Amazing	AT2 AT2 AT3 AT2 AT2 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2	Equ Mix Fra Fra SAV Equ Alg Tr/V Mix Mul Mix PNo PNo Rat Ang	6 6 3 5 8 4 1/2 3 6 3 8 EP 5	2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2369	End of level Review End of level Review Matching Algebraic Exps w/s Angle Fit w/s Approximate Solutions Rotational & Line Symmetry Review Right-angle or not? Decimal Routes w/s Conversion Pack 1 Decimal Playing Cards Higher Decimal Win Decimal Difference Sixteen Quadrilaterals Matching Decimals Decimal Sort	AT2/3/ AT2/3/ AT2/3/ AT2 AT3 AT2 AT3 AT3 AT2 AT3 O.R. AT2 AT2 AT3 AT2 AT3	Alg APr Or/R CTr Ang Dec Rat Or/R Dec PSh Or/R Dec	8 F 7 4 5 5 5 5 5 5 5 5 5 5 5 6 5 4 4 4 4 4 4
2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2166 2167 2168 2169 2170 2171 2172	Sum Dice Visualising Fraction Squares Some Sums for your Mind w/s Turning Green w/s Permutating Tricubes Folding Fractions Shape Names w/s Angles and Triangles Geometry Facts Information Displayed Matching Equations Range of Area Cube Root Calculator Pop of Britain 1880 and 1980 Shape Up	AT2 AT3 AT2 AT4 AT4 AT4 AT3 AT3 O.R. AT4 AT2 AT3 AT4 AT4 AT4 AT4 AT4	Add Mix PSh Fra Mix L&S Pro Fra PSh APr DDa Gra Or/R DDa PSh DDa Or/R	6 5 6 7 1/2 8 5 5 6 5 8 8 6 7 6 5 4	2253 2254 2255 2256 2257 2258 2259 2261 2262 2263 2264 2265 2266 2267 2268 2269 2270	Calculator Brackets Adding One Matching Fractions w/s Right Angled Triangular Prisms Substituting into Formulae Multiplication Flags w/s Shape-Tiles w/s Find the Route w/s Spreadsheet Squares Plus and Minus Grids w/s Rational Numbers Irrational Numbers Introducing Ratio Logo is Amazing Amazing Logo Measuring Pencils	AT2 AT2 AT3 AT2 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT3 AT3 AT3 AT3 AT3	Equ Mix Fra Fra SAV Equ Alg Tr/V Mix Mul Mix PNo Rat Ang Ang Mea	6 6 3 5 8 4 1/2 3 6 3 8 EP 5 4 5 4	2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2369 2370 2371 2372	End of level Review End of level Review Matching Algebraic Exps w/s Angle Fit w/s Approximate Solutions Rotational & Line Symmetry Review Right-angle or not? Decimal Routes w/s Conversion Pack 1 Decimal Playing Cards Higher Decimal Win Decimal Difference Sixteen Quadrilaterals Matching Decimals Decimal Sort Conversion Pack 2 Rounding to 10	AT2/3/ AT2/3/ AT2/3/ AT2 AT3 AT2 AT3 AT2 AT3 O.R. AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2	Alg APr Or/R CTr Ang Dec Rat Or/R Dec PSh Or/R Dec Rat Or/R Dec Rat Or/R Dec Rat Or/R Dec	8P7455255 56544635
2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2166 2167 2168 2169 2170 2171 2172 2173	Sum Dice Visualising Fraction Squares Some Sums for your Mind w/s Turning Green w/s Permutating Tricubes Folding Fractions Shape Names w/s Angles and Triangles Geometry Facts Information Displayed Matching Equations Range of Area Cube Root Calculator Pop of Britain 1880 and 1980 Shape Up Pie Chart Match w/s Two Down Unmarked Angles w/s	AT2 AT3 AT2 AT4 AT4 AT4 AT3 AT3 O.R. AT4 AT2 AT3 AT4 AT4 AT3 AT4 AT3 AT4	Add Mix PSh Fra Mix L&S Pro Fra PSh APr DDa Gra Or/R DDa PSh DDa Or/R APr	6 5 6 7 1/2 8 5 5 6 5 8 8 6 7 6 5 4 6	2253 2254 2255 2256 2257 2258 2259 2261 2262 2263 2264 2265 2266 2267 2268 2269 2270 2271 2272 2273	Calculator Brackets Adding One Matching Fractions w/s Right Angled Triangular Prisms Substituting into Formulae Multiplication Flags w/s Shape-Tiles w/s Find the Route w/s Spreadsheet Squares Plus and Minus Grids w/s Rational Numbers Irrational Numbers Introducing Ratio Logo is Amazing Amazing Logo Measuring Pencils I've got the Power Lines, Regions and Inequalities Looping Chains	AT2 AT2 AT3 AT2 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT3 AT3 AT3 AT3 AT3 AT3 AT3	Equ Mix Fra Fra SAV Equ Alg Tr/V Mix PNo Rat Ang Ang Mea P&R	6 6 3 5 8 4 1/2 3 6 3 8 EP 5 4 5 4 7 5	2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2369 2370 2371 2372 2373	End of level Review End of level Review Matching Algebraic Exps w/s Angle Fit w/s Approximate Solutions Rotational & Line Symmetry Review Right-angle or not? Decimal Routes w/s Conversion Pack 1 Decimal Playing Cards Higher Decimal Win Decimal Difference Sixteen Quadrilaterals Matching Decimals Decimal Sort Conversion Pack 2 Rounding to 10 Powers of Ten Flags w/s Queens (MOVE) Equivalent Fractions Pairs	AT2/3/ AT2/3/ AT2/3/ AT2 AT3 AT2 AT3 AT2 AT3 O.R. AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2	Alg APr Or/R CTr Ang Dec Rat Or/R Dec Rat Or/R Dec Rat Or/R Dec Rat Or/R Dec Fra	8P7455255 56544635 5
2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2166 2167 2168 2169 2170 2171 2172 2173 2174	Sum Dice Visualising Fraction Squares Some Sums for your Mind w/s Turning Green w/s Permutating Tricubes Folding Fractions Shape Names w/s Angles and Triangles Geometry Facts Information Displayed Matching Equations Range of Area Cube Root Calculator Pop of Britain 1880 and 1980 Shape Up Pie Chart Match w/s Two Down Unmarked Angles w/s The Mode w/s	AT2 AT3 AT2 AT4 AT4 AT3 AT3 O.R. AT4 AT2 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4	Add Mix PSh Fra Mix S Pro Fra PSh APr DDa Gra Or/R DDa Or/R APr AIDa	6 5 6 7 1/2 8 5 5 6 5 8 8 6 7 6 5 4 6 4	2253 2254 2255 2256 2257 2258 2259 2261 2262 2263 2264 2265 2266 2267 2268 2269 2270 2271 2272 2273 2274	Calculator Brackets Adding One Matching Fractions w/s Right Angled Triangular Prisms Substituting into Formulae Multiplication Flags w/s Shape-Tiles w/s Find the Route w/s Spreadsheet Squares Plus and Minus Grids w/s Rational Numbers Irrational Numbers Introducing Ratio Logo is Amazing Amazing Logo Measuring Pencils I've got the Power Lines, Regions and Inequalities Looping Chains abc w/s	AT2 AT2 AT3 AT2 AT3 AT2 AT2 AT2 AT2 AT2 AT3 AT3 AT3 AT3 AT3 AT3 AT3 AT2 AT2 AT3	Equ Mix Fra Fra SAV Equ Alg Tr/V Mix PNo Rat Ang Ang Ang Ang Seq Alg	6 6 3 5 8 4 1/2 3 6 3 8 EP 5 4 5 5 4 7 5 5 5	2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2369 2370 2371 2372 2373 2374	End of level Review End of level Review Matching Algebraic Exps w/s Angle Fit w/s Approximate Solutions Rotational & Line Symmetry Review Right-angle or not? Decimal Routes w/s Conversion Pack 1 Decimal Playing Cards Higher Decimal Win Decimal Difference Sixteen Quadrilaterals Matching Decimals Decimal Sort Conversion Pack 2 Rounding to 10 Powers of Ten Flags w/s Queens (MOVE) Equivalent Fractions Pairs Polygons in Circles	AT2/3/ AT2/3/ AT2/3/ AT2 AT3 AT3 AT3 AT3 AT2 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2	Alg APr Or/R CTr Ang Dec Rat Or/R Dec PSh Or/R Dec Rat Or/R Dec Rat Or/R Dec Rat Or/R Dec	8P7455255 56544635
2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2166 2167 2168 2169 2170 2171 2172 2173 2174 2175	Sum Dice Visualising Fraction Squares Some Sums for your Mind w/s Turning Green w/s Permutating Tricubes Folding Fractions Shape Names w/s Angles and Triangles Geometry Facts Information Displayed Matching Equations Range of Area Cube Root Calculator Pop of Britain 1880 and 1980 Shape Up Pie Chart Match w/s Two Down Unmarked Angles w/s The Mode w/s Grouping Data	AT2 AT3 AT2 AT4 AT4 AT3 AT3 O.R. AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT4	Add Mix PSh Fra Mix L&S Pro Fra PSh APr DDa Gra Or/R DDa PSh DDa Or/R APr	6 5 6 7 1/2 8 5 5 6 5 8 8 6 7 6 5 4 6	2253 2254 2255 2256 2257 2258 2259 2261 2262 2263 2264 2265 2266 2267 2268 2269 2270 2271 2272 2273 2274 2275	Calculator Brackets Adding One Matching Fractions w/s Right Angled Triangular Prisms Substituting into Formulae Multiplication Flags w/s Shape-Tiles w/s Find the Route w/s Spreadsheet Squares Plus and Minus Grids w/s Rational Numbers Irrational Numbers Introducing Ratio Logo is Amazing Amazing Logo Measuring Pencils I've got the Power Lines, Regions and Inequalities Looping Chains abc w/s Algebra Problems	AT2 AT2 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT3 AT3 AT3 AT3 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT2	Equ Mix Fra Fra SAV Equ Alg Tr/V Mul Mix PNo Rat Ang Mea P&R Alg Seq Alg Equ	6 6 3 5 8 4 1/2 3 6 3 8 EP 5 4 5 8 7 5 8 8 7 8 8 8 8 8 8 8 8 7 8 8 8 8	2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2370 2371 2372 2373 2374 2375 2376	End of level Review End of level Review Matching Algebraic Exps w/s Angle Fit w/s Approximate Solutions Rotational & Line Symmetry Review Right-angle or not? Decimal Routes w/s Conversion Pack 1 Decimal Playing Cards Higher Decimal Win Decimal Difference Sixteen Quadrilaterals Matching Decimals Decimal Sort Conversion Pack 2 Rounding to 10 Powers of Ten Flags w/s Queens (MOVE) Equivalent Fractions Pairs Polygons in Circles Maths in Your Head	AT2/3/ AT2/3/ AT2/3/ AT2 AT3 AT3 AT3 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2	A Alg APr Or/R CTr Ang Dec Rat Or/R Dec PSh Or/R Dec Rat Or/R Dec Tra Dra	8P7455255 56544635 56
2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2166 2167 2168 2170 2171 2172 2173 2174 2175 2176	Sum Dice Visualising Fraction Squares Some Sums for your Mind w/s Turning Green w/s Permutating Tricubes Folding Fractions Shape Names w/s Angles and Triangles Geometry Facts Information Displayed Matching Equations Range of Area Cube Root Calculator Pop of Britain 1880 and 1980 Shape Up Pie Chart Match w/s Two Down Unmarked Angles w/s The Mode w/s Grouping Data Talking (poster)	AT2 AT3 AT2 AT4 AT4 AT3 AT3 AT3 AT4 AT4 AT3 AT4 AT4 AT4 AT4 AT4 AT4 AT4 AT4 AT4 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7	Add Mix PSh Fra Mix L&S Pro Fra PSh APr DDa Gra Or/R DDa PSh DDa Or/R APr AIDa AIDa AIDa	6 5 6 7 1/2 8 5 5 6 5 8 8 6 7 6 5 4 6 4 7	2253 2254 2255 2256 2257 2258 2259 2261 2262 2263 2264 2265 2266 2267 2268 2270 2271 2272 2273 2274 2275 2276	Calculator Brackets Adding One Matching Fractions w/s Right Angled Triangular Prisms Substituting into Formulae Multiplication Flags w/s Shape-Tiles w/s Find the Route w/s Spreadsheet Squares Plus and Minus Grids w/s Rational Numbers Irrational Numbers Introducing Ratio Logo is Amazing Amazing Logo Measuring Pencils I've got the Power Lines, Regions and Inequalities Looping Chains abc w/s Algebra Problems Curvy Tiles in LOGO	AT2 AT2 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT3 AT3 AT3 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT3 AT2 AT3 AT2 AT3 AT4 AT5 AT5 AT5 AT5 AT5 AT5 AT5 AT5 AT5 AT5	Equ Mix Fra Fra SAV Equ Alg Tr/V Mul No PNo Rat Ang Ang Ang Ang P&Ra Seq Alg Equ Dra	6 6 3 5 8 4 1/2 3 6 3 8 EP 5 4 5 4 5 8 6 6 6 6	2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2370 2371 2372 2373 2374 2375 2376	End of level Review End of level Review Matching Algebraic Exps w/s Angle Fit w/s Approximate Solutions Rotational & Line Symmetry Review Right-angle or not? Decimal Routes w/s Conversion Pack 1 Decimal Playing Cards Higher Decimal Win Decimal Difference Sixteen Quadrilaterals Matching Decimals Decimal Sort Conversion Pack 2 Rounding to 10 Powers of Ten Flags w/s Queens (MOVE) Equivalent Fractions Pairs Polygons in Circles Maths in Your Head TenSprint(NUM)	AT2/3/ AT2/3/ AT2/3/ AT2 AT3 AT3 AT3 AT3 AT2 AT3 AT3 AT4 AT4 AT5 AT5 AT6 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7	A Alg APr Or/R CTr Ang Dec Rat Or/R Dec Rat Or/R Dec Rat Or/R Dec Add	8P7455255 56544635 56 1/2
2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2166 2167 2168 2170 2171 2172 2173 2174 2175 2176 2177	Sum Dice Visualising Fraction Squares Some Sums for your Mind w/s Turning Green w/s Permutating Tricubes Folding Fractions Shape Names w/s Angles and Triangles Geometry Facts Information Displayed Matching Equations Range of Area Cube Root Calculator Pop of Britain 1880 and 1980 Shape Up Pie Chart Match w/s Two Down Unmarked Angles w/s The Mode w/s Grouping Data Talking (poster) Population Projections	AT2 AT3 AT2 AT4 AT4 AT2 AT3 AT4 AT4 AT4 AT4 AT4 AT4 AT4 AT4 AT4 AT4	Add Mix PSh Fra Mix L&S Pro Fra PSh APr DDa Gra Or/R DDa PSh DDa PSh APr APr APr APr APr APr APr APr	6 5 6 7 1/2 8 5 5 6 5 8 8 6 7 6 5 4 6 4 7 5	2253 2254 2255 2256 2257 2258 2259 2261 2262 2263 2264 2265 2266 2267 2268 2270 2271 2272 2273 2274 2275 2276 2276	Calculator Brackets Adding One Matching Fractions w/s Right Angled Triangular Prisms Substituting into Formulae Multiplication Flags w/s Shape-Tiles w/s Find the Route w/s Spreadsheet Squares Plus and Minus Grids w/s Rational Numbers Irrational Numbers Irrational Numbers Introducing Ratio Logo is Amazing Amazing Logo Measuring Pencils I've got the Power Lines, Regions and Inequalities Looping Chains abc w/s Algebra Problems Curvy Tiles in LOGO Brackets	AT2 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT3 AT3 AT3 AT3 AT3 AT4 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT2 AT2 AT3 AT2 AT3 AT4 AT4 AT5 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7	Equ Mix Fra Fra SAV Equ Alg Tr/V Mix PNo Rat Ang Ang Ang Ang Ang P&R Gra Seq Lqu Dra Alg	6 6 3 5 8 4 1/2 3 6 3 8 EP 5 4 8 7 5 5 8 6 7	2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2370 2371 2372 2373 2374 2375 2376 2377	End of level Review End of level Review Matching Algebraic Exps w/s Angle Fit w/s Approximate Solutions Rotational & Line Symmetry Review Right-angle or not? Decimal Routes w/s Conversion Pack 1 Decimal Playing Cards Higher Decimal Win Decimal Difference Sixteen Quadrilaterals Matching Decimals Decimal Sort Conversion Pack 2 Rounding to 10 Powers of Ten Flags w/s Queens (MOVE) Equivalent Fractions Pairs Polygons in Circles Maths in Your Head TenSprint(NUM) Matching Fractions(NUM)	AT2/3/ AT2/3/ AT2/3/ AT2 AT3 AT3 AT3 AT2 AT3 O.R. AT2 AT3 AT2 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT2 AT2 AT2 AT2 AT2 AT3 AT2 AT2 AT2 AT3 AT2 AT2 AT3 AT2 AT2 AT3 AT2 AT2 AT3 AT2 AT2 AT2 AT3 AT2 AT2 AT3 AT2 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2	A Alg APr Or/R CTr Ang Dec Rat Or/R Dec Rat Or/R Dec Rat Or/R Dec Add Fra	8P7455255 56544635 56 1/5
2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2166 2167 2168 2170 2171 2172 2173 2174 2175 2176 2177	Sum Dice Visualising Fraction Squares Some Sums for your Mind w/s Turning Green w/s Permutating Tricubes Folding Fractions Shape Names w/s Angles and Triangles Geometry Facts Information Displayed Matching Equations Range of Area Cube Root Calculator Pop of Britain 1880 and 1980 Shape Up Pie Chart Match w/s Two Down Unmarked Angles w/s The Mode w/s Grouping Data Talking (poster) Population Projections Volumes	AT2 AT3 AT2 AT4 AT4 AT3 AT3 O.R. AT4 AT3 AT4 AT4 AT3 AT4 AT4 AT4 AT4 AT4 AT4 AT4 AT4 AT4 AT4	Add Mix PSh Fra Mix L&S Pro Fra PSh APr DDa Gra Or/R DDa PSh DDa PSh DDa AIDa AIDa AIDa SA/V	6 5 6 7 1/2 8 5 5 6 5 8 8 6 7 6 5 4 6 4 7 5 5	2253 2254 2255 2256 2257 2258 2259 2261 2262 2263 2264 2265 2266 2267 2268 2269 2270 2271 2272 2273 2274 2275 2276 2277 2278	Calculator Brackets Adding One Matching Fractions w/s Right Angled Triangular Prisms Substituting into Formulae Multiplication Flags w/s Shape-Tiles w/s Find the Route w/s Spreadsheet Squares Plus and Minus Grids w/s Rational Numbers Irrational Numbers Introducing Ratio Logo is Amazing Amazing Logo Measuring Pencils I've got the Power Lines, Regions and Inequalities Looping Chains abc w/s Algebra Problems Curvy Tiles in LOGO Brackets Mapping Jigsaw w/s	AT2 AT3 AT2 AT3 AT2 AT2 AT2 AT2 AT2 AT3 AT3 AT3 AT3 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2	Equ Mix Fra SAV Equ Alg Tr/X Mix PNo Rat Ang Ang Ang Ang Ang Ang Ang Ang Ang Ang	6 6 3 5 8 4 1/2 3 6 3 8 EP 5 4 5 5 8 6 7 3	2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2370 2371 2372 2373 2374 2375 2376 2377 2378 2379	End of level Review End of level Review Matching Algebraic Exps w/s Angle Fit w/s Approximate Solutions Rotational & Line Symmetry Review Right-angle or not? Decimal Routes w/s Conversion Pack 1 Decimal Playing Cards Higher Decimal Win Decimal Difference Sixteen Quadrilaterals Matching Decimals Decimal Sort Conversion Pack 2 Rounding to 10 Powers of Ten Flags w/s Queens (MOVE) Equivalent Fractions Pairs Polygons in Circles Maths in Your Head TenSprint(NUM) Matching Fractions (NUM) Ordering Fractions (NUM)	AT2/3/ AT2/3/ AT2/3/ AT2 AT3 AT3 AT3 AT2 AT3 AT2 AT3 AT2 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT3 AT2 AT3 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT3 AT2 AT3 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT3 AT2 AT3 AT3 AT2 AT3 AT3 AT2 AT3 AT3 AT2 AT3 AT3 AT4 AT4 AT5 AT5 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7	A Alg APr Or/R CTr Ang Dec PSh Or/R Dec Rat Or/R Dec Rat Or/R Dec Fra Add Fra Fra	8P7455255 56544635 56 1/55
2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2166 2167 2168 2170 2171 2172 2173 2174 2175 2176 2177	Sum Dice Visualising Fraction Squares Some Sums for your Mind w/s Turning Green w/s Permutating Tricubes Folding Fractions Shape Names w/s Angles and Triangles Geometry Facts Information Displayed Matching Equations Range of Area Cube Root Calculator Pop of Britain 1880 and 1980 Shape Up Pie Chart Match w/s Two Down Unmarked Angles w/s The Mode w/s Grouping Data Talking (poster) Population Projections	AT2 AT3 AT2 AT4 AT4 AT2 AT3 AT4 AT4 AT4 AT4 AT4 AT4 AT4 AT4 AT4 AT4	Add Mix PSh Fra Mix L&S Pro Fra PSh APr DDa Gra Or/R DDa PSh DDa PSh APr APr APr APr APr APr APr APr	6 5 6 7 1/2 8 5 5 6 5 8 8 6 7 6 5 4 6 4 7 5	2253 2254 2255 2256 2257 2258 2259 2261 2262 2263 2264 2265 2266 2267 2268 2270 2271 2272 2273 2274 2275 2276 2276	Calculator Brackets Adding One Matching Fractions w/s Right Angled Triangular Prisms Substituting into Formulae Multiplication Flags w/s Shape-Tiles w/s Find the Route w/s Spreadsheet Squares Plus and Minus Grids w/s Rational Numbers Irrational Numbers Irrational Numbers Introducing Ratio Logo is Amazing Amazing Logo Measuring Pencils I've got the Power Lines, Regions and Inequalities Looping Chains abc w/s Algebra Problems Curvy Tiles in LOGO Brackets	AT2 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT3 AT3 AT3 AT3 AT3 AT4 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT2 AT2 AT3 AT2 AT3 AT4 AT4 AT5 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7	Equ Mix Fra Fra SAV Equ Alg Tr/V Mix PNo Rat Ang Ang Ang Ang Ang P&R Gra Seq Lqu Dra Alg	6 6 3 5 8 4 1/2 3 6 3 8 EP 5 4 8 7 5 5 8 6 7	2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2370 2371 2372 2373 2374 2375 2376 2377	End of level Review End of level Review Matching Algebraic Exps w/s Angle Fit w/s Approximate Solutions Rotational & Line Symmetry Review Right-angle or not? Decimal Routes w/s Conversion Pack 1 Decimal Playing Cards Higher Decimal Win Decimal Difference Sixteen Quadrilaterals Matching Decimals Decimal Sort Conversion Pack 2 Rounding to 10 Powers of Ten Flags w/s Queens (MOVE) Equivalent Fractions Pairs Polygons in Circles Maths in Your Head TenSprint(NUM) Matching Fractions(NUM)	AT2/3/ AT2/3/ AT2/3/ AT2 AT3 AT3 AT3 AT2 AT3 O.R. AT2 AT3 AT2 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT2 AT2 AT2 AT2 AT2 AT3 AT2 AT2 AT2 AT3 AT2 AT2 AT3 AT2 AT2 AT3 AT2 AT2 AT3 AT2 AT2 AT2 AT3 AT2 AT2 AT3 AT2 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2	A Alg APr Or/R CTr Ang Dec Rat Or/R Dec Rat Or/R Dec Rat Or/R Dec Add Fra	8P7455255 56544635 56 1/5
2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2166 2167 2168 2170 2171 2172 2173 2174 2175 2176 2177 2178 2179	Sum Dice Visualising Fraction Squares Some Sums for your Mind w/s Turning Green w/s Permutating Tricubes Folding Fractions Shape Names w/s Angles and Triangles Geometry Facts Information Displayed Matching Equations Range of Area Cube Root Calculator Pop of Britain 1880 and 1980 Shape Up Pie Chart Match w/s Two Down Unmarked Angles w/s The Mode w/s Grouping Data Talking (poster) Population Projections Volumes Shakes and Adders Big Hand Big Foot?	AT2 AT3 AT2 AT4 AT4 AT3 AT3 O.R. AT2 AT3 AT4 AT3 AT4 AT3 AT4 AT4 AT3 AT4 AT4 AT3 AT4 AT4 AT3 AT4 AT4 AT5 AT4 AT5 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7	Add Mix PSh Fra Mix L&S Pro Fra PSh APr DDa Gra Or/R DDa Or/R APr AIDa AIDa AIDa SA/V DNo CDa	6 5 6 7 2 8 5 5 6 5 8 8 6 7 6 5 4 6 4 7 5 5 5 5	2253 2254 2255 2256 2257 2258 2259 2261 2262 2263 2264 2265 2266 2267 2268 2270 2271 2272 2273 2274 2275 2276 2277 2278 2279	Calculator Brackets Adding One Matching Fractions w/s Right Angled Triangular Prisms Substituting into Formulae Multiplication Flags w/s Shape-Tiles w/s Find the Route w/s Spreadsheet Squares Plus and Minus Grids w/s Rational Numbers Irrational Numbers Introducing Ratio Logo is Amazing Amazing Logo Measuring Pencils I've got the Power Lines, Regions and Inequalities Looping Chains abc w/s Algebra Problems Curvy Tiles in LOGO Brackets Mapping Jigsaw w/s Island Game	AT2 AT2 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT3 AT3 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2	Equ Mix Fra SAV Equ Alg Tr/V Mix PNo Rat Ang Mea P&R Gra Alg Dra Alg Dra Alg Tr/V Tix Mix PNo Rat Ang Mea P&R Alg Tra Mix PNo Rat Ang Mea Parit Ang Mea Parit Ang Mea Parit Ang Mea Parit Ang Mea Parit Ang Mea Parit Ang Mea Parit Mea Pa Mea Parit Mea Parit Mea Pa Mea Pa Mea Pa Mea Pa Mea Pa Mea Pa Mea Pa Mea Pa Mea Mea Mea Pa Mea Mea Mea Mea Mea Mea Mea Mea Mea Me	6 6 3 5 8 4 1/2 3 6 3 8 EP 5 4 5 5 8 6 7 3 1/2	2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2370 2371 2372 2373 2374 2375 2376 2377 2378 2377 2378 2379 2380 2381 2382	End of level Review End of level Review Matching Algebraic Exps w/s Angle Fit w/s Approximate Solutions Rotational & Line Symmetry Review Right-angle or not? Decimal Routes w/s Conversion Pack 1 Decimal Playing Cards Higher Decimal Win Decimal Difference Sixteen Quadrilaterals Matching Decimals Decimal Sort Conversion Pack 2 Rounding to 10 Powers of Ten Flags w/s Queens (MOVE) Equivalent Fractions Pairs Polygons in Circles Maths in Your Head TenSprint(NUM) Matching Fractions (NUM) Ordering Fractions (NUM) Number Lines (NUM) Number Lines D (NUM) Areas of Polygons w/s	AT2/3/ AT2/3/ AT2/3/ AT2 AT3 AT3 AT3 AT2 AT3 O.R. AT2 AT2 AT3 AT2 AT2 AT3 AT2 AT2 AT3 AT2 AT3 AT2 AT2 AT3 AT2 AT2 AT3 AT3 AT2 AT3 AT3 AT2 AT3 AT3 AT4 AT4 AT4 AT4 AT4 AT4 AT4 AT4 AT4 AT4	A Alg APr Or/R CTr Ang Dect Or/R Dect Or/R Dect Or/R Dect Add AFra Add AFra Rat Rat A&P	8P7455255 56544635 56 255465
2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2166 2167 2168 2169 2170 2171 2172 2173 2174 2175 2176 2177 2178 2179	Sum Dice Visualising Fraction Squares Some Sums for your Mind w/s Turning Green w/s Permutating Tricubes Folding Fractions Shape Names w/s Angles and Triangles Geometry Facts Information Displayed Matching Equations Range of Area Cube Root Calculator Pop of Britain 1880 and 1980 Shape Up Pie Chart Match w/s Two Down Unmarked Angles w/s The Mode w/s Grouping Data Talking (poster) Population Projections Volumes Shakes and Adders Big Hand Big Foot? Shongo Networks	AT2 AT3 AT2 AT4 AT4 AT3 AT3 O.R. AT2 AT3 AT4 AT3 AT4 AT3 AT4 AT4 AT3 AT4 AT4 AT3 AT4 AT4 AT3 AT4 AT4 AT5 AT5 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7	Add Mix PSh Fra Mix L&S Pro Fra PSh APr DDa Gra P&R DDa Or/R APr AIDa AIDa AIDa AIDa CDa CDa PAG	6567/28556 5 8867654647 555 57	2253 2254 2255 2256 2257 2258 2259 2261 2262 2263 2264 2265 2266 2267 2268 2269 2270 2271 2272 2273 2274 2275 2276 2277 2278 2279 2280 2281	Calculator Brackets Adding One Matching Fractions w/s Right Angled Triangular Prisms Substituting into Formulae Multiplication Flags w/s Shape-Tiles w/s Find the Route w/s Spreadsheet Squares Plus and Minus Grids w/s Rational Numbers Irrational Numbers Introducing Ratio Logo is Amazing Amazing Logo Measuring Pencils I've got the Power Lines, Regions and Inequalities Looping Chains abc w/s Algebra Problems Curvy Tiles in LOGO Brackets Mapping Jigsaw w/s Island Game Equal Angles Simultaneous Match	AT2 AT2 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT3 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2	Equ Mix Fra SAV Equ Alg Tr/X Mix PNo Rat P&R Gra P&R Equ Dra Alg Dra Alg Tr/V Ang Ang Ang Ang Ang Ang Ang Ang Ang Ang	6 6 3 5 8 4 1/2 3 6 3 8 EP 5 4 5 4 8 7 5 5 8 6 7 3 7 3 7 3 7 3 7 3 7 3 7 3 7 3 7 3 7	2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2370 2371 2372 2373 2374 2375 2376 2377 2378 2377 2378 2379 2380 2381 2382 2383	End of level Review End of level Review Matching Algebraic Exps w/s Angle Fit w/s Approximate Solutions Rotational & Line Symmetry Review Right-angle or not? Decimal Routes w/s Conversion Pack 1 Decimal Playing Cards Higher Decimal Win Decimal Difference Sixteen Quadrilaterals Matching Decimals Decimal Sort Conversion Pack 2 Rounding to 10 Powers of Ten Flags w/s Queens (MOVE) Equivalent Fractions Pairs Polygons in Circles Maths in Your Head Ten Sprint (NUM) Matching Fractions (NUM) Ordering Fractions (NUM) Number Lines (NUM) Number Lines (NUM) Areas of Polygons w/s Solid Expressions	AT2/3/ AT2/3/ AT2/3/ AT3 AT3 AT3 AT3 AT2 AT3 O.R. AT2 AT3 AT2 AT3 AT2 AT2 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2	A Alg APr Alg	8P7455255 56544635 56 2554658
2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2166 2167 2168 2169 2170 2171 2172 2173 2174 2175 2176 2177 2178 2179 2181 2182 2183	Sum Dice Visualising Fraction Squares Some Sums for your Mind w/s Turning Green w/s Permutating Tricubes Folding Fractions Shape Names w/s Angles and Triangles Geometry Facts Information Displayed Matching Equations Range of Area Cube Root Calculator Pop of Britain 1880 and 1980 Shape Up Pie Chart Match w/s Two Down Unmarked Angles w/s The Mode w/s Grouping Data Talking (poster) Population Projections Volumes Shakes and Adders Big Hand Big Foot? Shongo Networks Using Standard Form	AT2 AT3 AT2 AT4 AT4 AT3 AT3 AT4 AT3 AT4 AT3 AT4 AT4 AT3 AT4 AT4 AT3 AT4 AT4 AT4 AT4 AT4 AT4 AT4 AT4 AT5 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7	Add Mix PSh Fra Mix L&S Pro Fra PSh APr DDa Gra P&R DDa Or/R AIDa AIDa AIDa AIDa CDa P&R DNo CDa P&R	656728556 5 8867654647 555 578	2253 2254 2255 2256 2257 2258 2259 2261 2262 2263 2264 2265 2266 2267 2268 2269 2270 2271 2272 2273 2274 2275 2276 2277 2278 2277 2278 2279 2280 2281	Calculator Brackets Adding One Matching Fractions w/s Right Angled Triangular Prisms Substituting into Formulae Multiplication Flags w/s Shape-Tiles w/s Find the Route w/s Spreadsheet Squares Plus and Minus Grids w/s Rational Numbers Introducing Ratio Logo is Amazing Amazing Logo Measuring Pencils I've got the Power Lines, Regions and Inequalities Looping Chains abc w/s Algebra Problems Curvy Tiles in LOGO Brackets Mapping Jigsaw w/s Island Game Equal Angles Simultaneous Match	AT2 AT2 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2	Equ Mix Fra SAV Equ Alg Tr/V Mixlo PNo Rat Ang Mea P&R Gra Seq Dra Alg Dra Map Tr/V Mixlo Mixlo PNo Rat Mea Rat Mixlo Mixlo Rat Mixlo Mixl	6 6 3 5 8 4 1/2 3 6 3 8 EP 5 4 5 4 8 7 5 5 8 6 7 3 7 3 7 3 7 3 7 3 7 3 7 3 7 3 7 3 7	2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2370 2371 2372 2373 2374 2375 2376 2377 2378 2378 2379 2380 2381 2382 2383 2384	End of level Review End of level Review Matching Algebraic Exps w/s Angle Fit w/s Approximate Solutions Rotational & Line Symmetry Review Right-angle or not? Decimal Routes w/s Conversion Pack 1 Decimal Playing Cards Higher Decimal Win Decimal Difference Sixteen Quadrilaterals Matching Decimals Decimal Sort Conversion Pack 2 Rounding to 10 Powers of Ten Flags w/s Queens (MOVE) Equivalent Fractions Pairs Polygons in Circles Maths in Your Head TenSprint(NUM) Matching Fractions (NUM) Ordering Fractions (NUM) Number Lines (NUM) Number Lines (NUM) Areas of Polygons w/s Solid Expressions Angles in a Regular Hexagon w/s	AT2/3/ AT2/3/ AT2/3/ AT2 AT3 AT3 AT2 AT3 O.R. AT2 AT3 AT2 AT3 AT2 AT2 AT3 AT2 AT2 AT3 AT2 AT2 AT3 AT2 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT3 AT2 AT3 AT3 AT3 AT3 AT3 AT3 AT3 AT3 AT3 AT3	A Alg APr Or/R CTr Ang Dect Or/R Dect Or/R Dect Or/R Dect Add AFr Add ARA SAV APr	8P7455255 56544635 56 25546585
2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2166 2167 2168 2169 2170 2171 2172 2173 2174 2175 2176 2177 2178 2179	Sum Dice Visualising Fraction Squares Some Sums for your Mind w/s Turning Green w/s Permutating Tricubes Folding Fractions Shape Names w/s Angles and Triangles Geometry Facts Information Displayed Matching Equations Range of Area Cube Root Calculator Pop of Britain 1880 and 1980 Shape Up Pie Chart Match w/s Two Down Unmarked Angles w/s The Mode w/s Grouping Data Talking (poster) Population Projections Volumes Shakes and Adders Big Hand Big Foot? Shongo Networks	AT2 AT3 AT2 AT4 AT4 AT3 AT3 O.R. AT2 AT3 AT4 AT3 AT4 AT3 AT4 AT4 AT3 AT4 AT4 AT3 AT4 AT4 AT3 AT4 AT4 AT5 AT5 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7	Add Mix PSh Fra Mix L&S Pro Fra PSh APr DDa Gra P&R DDa Or/R APr AIDa AIDa AIDa AIDa CDa CDa PAG	6567/28556 5 8867654647 555 57	2253 2254 2255 2256 2257 2258 2259 2261 2262 2263 2264 2265 2266 2267 2268 2269 2270 2271 2272 2273 2274 2275 2276 2277 2278 2279 2280 2281	Calculator Brackets Adding One Matching Fractions w/s Right Angled Triangular Prisms Substituting into Formulae Multiplication Flags w/s Shape-Tiles w/s Find the Route w/s Spreadsheet Squares Plus and Minus Grids w/s Rational Numbers Irrational Numbers Introducing Ratio Logo is Amazing Amazing Logo Measuring Pencils I've got the Power Lines, Regions and Inequalities Looping Chains abc w/s Algebra Problems Curvy Tiles in LOGO Brackets Mapping Jigsaw w/s Island Game Equal Angles Simultaneous Match Jumping BoxN (SENSE/NO)	AT2 AT2 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2	Equ Mix Fra SAV Equ Mix PNo Rat g PRa Alg Dra Dra Dra Dra Dra Dra Dra Dra Dra Dra	6 6 3 5 8 4 1/2 3 6 3 8 EP 5 4 5 4 8 7 5 5 8 6 7 3 1/2 3 7 3 4	2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2369 2370 2371 2372 2373 2374 2375 2376 2377 2378 2379 2380 2381 2382 2383 2384 2385	End of level Review End of level Review Matching Algebraic Exps w/s Angle Fit w/s Approximate Solutions Rotational & Line Symmetry Review Right-angle or not? Decimal Routes w/s Conversion Pack 1 Decimal Playing Cards Higher Decimal Win Decimal Difference Sixteen Quadrilaterals Matching Decimals Decimal Sort Conversion Pack 2 Rounding to 10 Powers of Ten Flags w/s Queens (MOVE) Equivalent Fractions Pairs Polygons in Circles Maths in Your Head TenSprint(NUM) Matching Fractions (NUM) Ordering Fractions (NUM) Number Lines (NUM) Number Lines (NUM) Areas of Polygons w/s Solid Expressions Angles in a Regular Hexagon w/s Nine Nine Nine	AT2/3/ AT2/3/ AT2/3/ AT3 AT3 AT3 AT3 AT3 AT2 AT2 AT3 AT2 AT2 AT3 AT2 AT2 AT3 AT2 AT2 AT2 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2	A Alg APr Or/R Dec Alg Or/R Or/R Dec Alg Or/R Or/R Dec Alg Or/R Or/R Dec Alg Or/R Or/R Dec Alg	8P7455255 56544635 56 255465854
2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2166 2167 2170 2171 2172 2173 2174 2175 2176 2177 2178 2179 2181 2183 2184	Sum Dice Visualising Fraction Squares Some Sums for your Mind w/s Turning Green w/s Permutating Tricubes Folding Fractions Shape Names w/s Angles and Triangles Geometry Facts Information Displayed Matching Equations Range of Area Cube Root Calculator Pop of Britain 1880 and 1980 Shape Up Pie Chart Match w/s Two Down Unmarked Angles w/s The Mode w/s Grouping Data Talking (poster) Population Projections Volumes Shakes and Adders Big Hand Big Foot? Shongo Networks Using Standard Form Powers of Integers	AT2 AT3 AT2 AT4 AT4 AT3 AT3 AT4 AT3 AT4 AT3 AT4 AT4 AT3 AT4 AT3 AT4 AT4 AT3 AT4 AT4 AT3 AT4 AT4 AT3 AT4 AT4 AT5 AT5 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7	Add Mix PSh Fra Mix L&S Pro Fra PSh APr DDa Gra Or/R DDa APr AIDa AIDa AIDa SA/V DNo CDa P&R P&R	656728556 5 8867654647 555 5788	2253 2254 2255 2256 2257 2258 2259 2261 2262 2263 2264 2265 2266 2267 2268 2269 2270 2271 2272 2273 2274 2275 2276 2277 2278 2279 2280 2281 2283 2284 2283	Calculator Brackets Adding One Matching Fractions w/s Right Angled Triangular Prisms Substituting into Formulae Multiplication Flags w/s Shape-Tiles w/s Find the Route w/s Spreadsheet Squares Plus and Minus Grids w/s Rational Numbers Introducing Ratio Logo is Amazing Amazing Logo Measuring Pencils I've got the Power Lines, Regions and Inequalities Looping Chains abc w/s Algebra Problems Curvy Tiles in LOGO Brackets Mapping Jigsaw w/s Island Game Equal Angles Simultaneous Match Jumping BoxN (SENSE/NO) GuessN (SENSE/NO)	AT2 AT2 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT2 AT2 AT2 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2	Equix Fra VE Alg Tr/V Mulx No PNot Ang Map VE Alg Map VE Alg Dra Alg Dra Alg Map VE Ang Cor/R	6 6 3 5 8 4 1/2 3 6 3 8 EP 5 4 5 4 8 7 5 5 8 6 7 3 7 3 7 3 7 3 7 3 7 3 7 3 7 3 7 3 7	2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2370 2371 2372 2373 2374 2375 2376 2377 2378 2379 2380 2381 2382 2383 2384 2385 2386	End of level Review End of level Review Matching Algebraic Exps w/s Angle Fit w/s Approximate Solutions Rotational & Line Symmetry Review Right-angle or not? Decimal Routes w/s Conversion Pack 1 Decimal Playing Cards Higher Decimal Win Decimal Difference Sixteen Quadrilaterals Matching Decimals Decimal Sort Conversion Pack 2 Rounding to 10 Powers of Ten Flags w/s Queens (MOVE) Equivalent Fractions Pairs Polygons in Circles Maths in Your Head TenSprint(NUM) Matching Fractions (NUM) Number Lines (NUM) Number Lines (NUM) Number Lines (NUM) Areas of Polygons w/s Solid Expressions Angles in a Regular Hexagon w/s Nine Nine Nine Multiplication Review	AT2/3/ AT2/3/ AT2/3/ AT2 AT3 AT3 AT3 AT2 AT2 AT3 AT2 AT2 AT3 AT2 AT2 AT2 AT3 AT2 AT2 AT3 AT2 AT2 AT3 AT2 AT2 AT2 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2	4 4 Alg r APr	8P7455255 56544635 56 2554658546
2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2166 2167 2168 2169 2170 2171 2172 2173 2174 2175 2176 2177 2178 2179 2181 2182 2183	Sum Dice Visualising Fraction Squares Some Sums for your Mind w/s Turning Green w/s Permutating Tricubes Folding Fractions Shape Names w/s Angles and Triangles Geometry Facts Information Displayed Matching Equations Range of Area Cube Root Calculator Pop of Britain 1880 and 1980 Shape Up Pie Chart Match w/s Two Down Unmarked Angles w/s The Mode w/s Grouping Data Talking (poster) Population Projections Volumes Shakes and Adders Big Hand Big Foot? Shongo Networks Using Standard Form	AT2 AT3 AT2 AT4 AT4 AT3 AT3 AT4 AT3 AT4 AT3 AT4 AT4 AT3 AT4 AT4 AT3 AT4 AT4 AT4 AT4 AT4 AT4 AT4 AT4 AT5 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7	Add Mix PSh Fra Mix L&S Pro Fra PSh APr DDa Gra P&R DDa Or/R AIDa AIDa AIDa AIDa CDa P&R DNo CDa P&R	656728556 5 8867654647 555 578	2253 2254 2255 2256 2257 2258 2259 2261 2262 2263 2264 2265 2266 2267 2268 2269 2270 2271 2272 2273 2274 2275 2276 2277 2278 2279 2280 2281 2283 2284 2285 2286	Calculator Brackets Adding One Matching Fractions w/s Right Angled Triangular Prisms Substituting into Formulae Multiplication Flags w/s Shape-Tiles w/s Find the Route w/s Spreadsheet Squares Plus and Minus Grids w/s Rational Numbers Irrational Numbers Irrational Numbers Introducing Ratio Logo is Amazing Amazing Logo Measuring Pencils I've got the Power Lines, Regions and Inequalities Looping Chains abc w/s Algebra Problems Curvy Tiles in LOGO Brackets Mapping Jigsaw w/s Island Game Equal Angles Simultaneous Match Jumping BoxN (SENSE/NO) GuessN (SENSE/NO) Quadrants and Squares (DIME)	AT2 AT2 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2	Equix Fra VE Alg Tr/V X Mix O P Rat Ang	6 6 3 5 8 4 1/2 3 6 3 8 PP 5 4 5 5 8 6 7 3 1/2 3 7 3 4 5	2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2369 2370 2371 2372 2373 2374 2375 2376 2377 2378 2379 2380 2381 2382 2383 2384 2385	End of level Review End of level Review Matching Algebraic Exps w/s Angle Fit w/s Approximate Solutions Rotational & Line Symmetry Review Right-angle or not? Decimal Routes w/s Conversion Pack 1 Decimal Playing Cards Higher Decimal Win Decimal Difference Sixteen Quadrilaterals Matching Decimals Decimal Sort Conversion Pack 2 Rounding to 10 Powers of Ten Flags w/s Queens (MOVE) Equivalent Fractions Pairs Polygons in Circles Maths in Your Head TenSprint(NUM) Matching Fractions (NUM) Ordering Fractions (NUM) Number Lines (NUM) Number Lines (NUM) Areas of Polygons w/s Solid Expressions Angles in a Regular Hexagon w/s Nine Nine Nine	AT2/3/ AT2/3/ AT2/3/ AT3 AT3 AT3 AT3 AT3 AT2 AT2 AT3 AT2 AT2 AT3 AT2 AT2 AT3 AT2 AT2 AT2 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2	A Alg APr Or/R Dec Alg Or/R Or/R Dec Alg Or/R Or/R Dec Alg Or/R Or/R Dec Alg Or/R Or/R Dec Alg	8P7455255 56544635 56 255465854
2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2166 2167 2168 2170 2171 2172 2173 2174 2175 2176 2177 2178 2177 2178 2179 2181 2182 2183 2184	Sum Dice Visualising Fraction Squares Some Sums for your Mind w/s Turning Green w/s Permutating Tricubes Folding Fractions Shape Names w/s Angles and Triangles Geometry Facts Information Displayed Matching Equations Range of Area Cube Root Calculator Pop of Britain 1880 and 1980 Shape Up Pie Chart Match w/s Two Down Unmarked Angles w/s The Mode w/s Grouping Data Talking (poster) Population Projections Volumes Shakes and Adders Big Hand Big Foot? Shongo Networks Using Standard Form Powers of Integers Missing Pieces w/s	AT2 AT3 AT2 AT4 AT4 AT3 AT3 AT4 AT3 AT4 AT3 AT4 AT4 AT3 AT4 AT4 AT3 AT4 AT4 AT4 AT4 AT4 AT4 AT4 AT4 AT4 AT4	Add Mix PSh Fra Mix L&S Pro Frsh APr DDa Gra PSh DDa DDa DDa AIDa AIDa AIDa AIDa CP&R Mix DNo CP&R DDa AIDa Mix DNo CP&R DNo DNo DNo DNo DNo DNo DNo DNo DNo DNo	6 5 6 7 1/2 8 5 5 6 5 8 8 6 7 6 5 4 6 4 7 5 5 5 5 7 8 8 1/2	2253 2254 2255 2256 2257 2258 2259 2261 2262 2263 2264 2265 2266 2267 2268 2269 2270 2271 2272 2273 2274 2275 2276 2277 2278 2279 2280 2281 2283 2284 2285 2286	Calculator Brackets Adding One Matching Fractions w/s Right Angled Triangular Prisms Substituting into Formulae Multiplication Flags w/s Shape-Tiles w/s Find the Route w/s Spreadsheet Squares Plus and Minus Grids w/s Rational Numbers Introducing Ratio Logo is Amazing Amazing Logo Measuring Pencils I've got the Power Lines, Regions and Inequalities Looping Chains abc w/s Algebra Problems Curvy Tiles in LOGO Brackets Mapping Jigsaw w/s Island Game Equal Angles Simultaneous Match Jumping BoxN (SENSE/NO) GuessN (SENSE/NO)	AT2 AT2 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2	Equix Fra VE Alg Tr/V Mulx No PNot Ang Map VE Alg Map VE Alg Dra Alg Dra Alg Map VE Ang Cor/R	6 6 3 5 8 4 1/2 3 6 3 8 P 5 4 5 4 8 7 5 5 8 6 7 3 1/2 3 7 3 4 5 4	2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2370 2371 2372 2373 2374 2375 2376 2377 2378 2379 2380 2381 2382 2383 2384 2385 2386 2387	End of level Review End of level Review Matching Algebraic Exps w/s Angle Fit w/s Approximate Solutions Rotational & Line Symmetry Review Right-angle or not? Decimal Routes w/s Conversion Pack 1 Decimal Playing Cards Higher Decimal Win Decimal Difference Sixteen Quadrilaterals Matching Decimals Decimal Sort Conversion Pack 2 Rounding to 10 Powers of Ten Flags w/s Queens (MOVE) Equivalent Fractions Pairs Polygons in Circles Maths in Your Head TenSprint(NUM) Matching Fractions (NUM) Ordering Fractions (NUM) Number Lines (NUM) Number Lines (NUM) Areas of Polygons w/s Solid Expressions Angles in a Regular Hexagon w/s Nine Nine Nine Multiplication Review Multiples of Ten w/s	AT2/3/ AT2/3/ AT2/3/ AT3 AT3 AT3 AT3 AT3 AT2 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT2 AT3 AT2 AT2 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT2	4 4 Alg r Property Algorians Algoria	8P7455255 56544635 56 25546585463
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2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2166 2167 2168 2169 2170 2171 2172 2173 2174 2175 2176 2177 2178 2177 2178 2179 2181 2183 2184 2186 2187 2188 2189 2190	Sum Dice Visualising Fraction Squares Some Sums for your Mind w/s Turning Green w/s Permutating Tricubes Folding Fractions Shape Names w/s Angles and Triangles Geometry Facts Information Displayed Matching Equations Range of Area Cube Root Calculator Pop of Britain 1880 and 1980 Shape Up Pie Chart Match w/s Two Down Unmarked Angles w/s The Mode w/s Grouping Data Talking (poster) Population Projections Volumes Shakes and Adders Big Hand Big Foot? Shongo Networks Using Standard Form Powers of Integers Missing Pieces w/s Pythagoras Plus Population Pyramids Strange Dice Game Twice as Many	AT2 AT3 AT2 AT4 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT4 AT3 AT4 AT4 AT3 AT4 AT4 AT3 AT4 AT4 AT3 AT4 AT4 AT3 AT4 AT4 AT3 AT4 AT3 AT4 AT4 AT5 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7	Add Mix PSh Fra Mix S Pro Fra PSh APr DDa Gra PSh ADDA AID A AID A SAV DNo CDa P&R Mig DDa P&R Mig DDa P&R Mig DDa Pag P&R Mig DDa Pro Rat	656728556 5 8867654647 555 5788 1/28743	2253 2254 2255 2256 2257 2258 2259 2261 2262 2263 2264 2265 2266 2267 2268 2269 2270 2271 2272 2273 2274 2275 2276 2277 2278 2279 2280 2281 2283 2284 2285 2286 2287 2283 2284 2285 2286 2287 2288 2289 2290	Calculator Brackets Adding One Matching Fractions w/s Right Angled Triangular Prisms Substituting into Formulae Multiplication Flags w/s Shape-Tiles w/s Find the Route w/s Spreadsheet Squares Plus and Minus Grids w/s Rational Numbers Irrational Numbers Introducing Ratio Logo is Amazing Amazing Logo Measuring Pencils I've got the Power Lines, Regions and Inequalities Looping Chains abc w/s Algebra Problems Curvy Tiles in LOGO Brackets Mapping Jigsaw w/s Island Game Equal Angles Simultaneous Match Jumping BoxN (SENSE/NO) GuessN (SENSE/NO) Quadrants and Squares (DIME) Add & Sub Squs & Quads (DIME) Algebra Tak-Tiles on a Grid (DIME) Alg Tak-Tiles without a Grid (DIME) Algebra Trees in Logical Prisoners Algebra Tak-Tiles without a Grid (DIME) Algebra Tak-Tiles without a Grid (DIME)	AT2 AT2 AT3 AT2 AT3 AT2 AT2 AT3 AT2 AT3 AT3 AT2 AT3 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT3 AT2 AT3 AT3 AT3 AT3 AT3 AT3 AT3 AT3 AT3 AT3	Equix Fra V Edg Tr/X Mill X Oo oo ta Barbara Anga Anga Anga Anga Anga Anga Anga Ang	6 6 3 5 8 4 1/2 3 6 3 8 P 5 4 5 4 8 7 5 5 8 6 7 3 2 3 7 3 4 5 4 6 6 7 7	2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2369 2370 2371 2372 2373 2374 2375 2378 2379 2380 2381 2382 2383 2384 2385 2386 2387 2388 2389 2390 2391	End of level Review End of level Review Matching Algebraic Exps w/s Angle Fit w/s Approximate Solutions Rotational & Line Symmetry Review Right-angle or not? Decimal Routes w/s Conversion Pack 1 Decimal Playing Cards Higher Decimal Win Decimal Difference Sixteen Quadrilaterals Matching Decimals Decimal Sort Conversion Pack 2 Rounding to 10 Powers of Ten Flags w/s Queens (MOVE) Equivalent Fractions Pairs Polygons in Circles Maths in Your Head TenSprint(NUM) Matching Fractions (NUM) Number Lines (NUM) Number Lines (NUM) Number Lines (NUM) Areas of Polygons w/s Solid Expressions Angles in a Regular Hexagon w/s Nine Nine Nine Multiplication Review Multiples of Ten w/s Six Pyramids Percentages Puzzles w/s Consecutive Products Matching Weights w/s	AT2/3/ AT2/3/ AT2/3/ AT3 AT3 AT3 AT3 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT3 AT2 AT3 AT3 AT2 AT3 AT3 AT2 AT3 AT3 AT2 AT3 AT3 AT2 AT3 AT3 AT2 AT3 AT3 AT3 AT2 AT3 AT3 AT3 AT3 AT3 AT3 AT3 AT3 AT3 AT3	4 Alg r R Or/R Open Open Open Open Open Open Open Open	8P7455255 56544635 56 255465854637653
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2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2168 2167 2168 2170 2171 2172 2173 2174 2175 2176 2177 2178 2177 2178 2179 2181 2182 2183 2184 2186 2187 2188 2189 2190 2191 2192	Sum Dice Visualising Fraction Squares Some Sums for your Mind w/s Turning Green w/s Permutating Tricubes Folding Fractions Shape Names w/s Angles and Triangles Geometry Facts Information Displayed Matching Equations Range of Area Cube Root Calculator Pop of Britain 1880 and 1980 Shape Up Pie Chart Match w/s Two Down Unmarked Angles w/s The Mode w/s Grouping Data Talking (poster) Population Projections Volumes Shakes and Adders Big Hand Big Foot? Shongo Networks Using Standard Form Powers of Integers Missing Pieces w/s Pythagoras Plus Population Pyramids Strange Dice Game Twice as Many Calculator Graphs Solving Quadratic Equations	AT2 AT3 AT4 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT5 AT6 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7	Add Mix PSh Fra Mix L&S Pro Fra PSh APr DDa Gra PSh DDa PSh DDa AIDa AIDa AIDa AIDa AIDa CDa P&R Muig DDa P&R Mix DDa CDa P&R DDa DDa DDa DDa DDa DDa DDa DDa DDa DD	6567/28556 5 8867654647 555 5788 /287437P	2253 2254 2255 2256 2257 2258 2259 2261 2262 2263 2264 2265 2266 2267 2268 2269 2270 2271 2272 2273 2274 2275 2276 2277 2278 2279 2280 2281 2283 2284 2285 2280 2281 2283 2284 2285 2286 2287 2288 2289 2290 2291 2292	Calculator Brackets Adding One Matching Fractions w/s Right Angled Triangular Prisms Substituting into Formulae Multiplication Flags w/s Shape-Tiles w/s Find the Route w/s Spreadsheet Squares Plus and Minus Grids w/s Rational Numbers Irrational Numbers Introducing Ratio Logo is Amazing Amazing Logo Measuring Pencils I've got the Power Lines, Regions and Inequalities Looping Chains abc w/s Algebra Problems Curvy Tiles in LOGO Brackets Mapping Jigsaw w/s Island Game Equal Angles Simultaneous Match Jumping BoxN (SENSE/NO) GuessN (SENSE/NO) Quadrants and Squares (DIME) Add & Sub Squs & Quads (DIME) Algebra Tak-Tiles on a Grid (DIME) A New Unit of Area (DIME) Comparing Areas (DIME) Towers (box)	AT2 AT2 AT3 AT2 AT2 AT2 AT2 AT2 AT2 AT2 AT3 AT2 AT2 AT3 AT2 AT2 AT3 AT2 AT2 AT3 AT2 AT2 AT3 AT2 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT3 AT3 AT3 AT3 AT3 AT3 AT3 AT3 AT3	Equix Fra V Edg Tr/X Mill X Oo No Ang	6 6 3 5 8 4 1/2 3 6 3 8 P 5 4 5 4 8 7 5 5 8 6 7 3 2 3 7 3 4 5 4 6 6 7 7 7	2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2370 2371 2372 2373 2374 2375 2376 2377 2378 2379 2380 2381 2382 2383 2384 2385 2386 2387 2388 2389 2390 2391 2392 2393	End of level Review End of level Review Matching Algebraic Exps w/s Angle Fit w/s Approximate Solutions Rotational & Line Symmetry Review Right-angle or not? Decimal Routes w/s Conversion Pack 1 Decimal Playing Cards Higher Decimal Win Decimal Difference Sixteen Quadrilaterals Matching Decimals Decimal Sort Conversion Pack 2 Rounding to 10 Powers of Ten Flags w/s Queens (MOVE) Equivalent Fractions Pairs Polygons in Circles Maths in Your Head TenSprint(NUM) Matching Fractions (NUM) Number Lines (NUM) Number Lines (NUM) Number Lines (NUM) Areas of Polygons w/s Solid Expressions Angles in a Regular Hexagon w/s Nine Nine Nine Multiplication Review Multiples of Ten w/s Six Pyramids Percentages Puzzles w/s Consecutive Products Matching Weights w/s Sensible Answers Equivalent Pairs (ENRICH)	AT2/3/ AT2/3/ AT2/3/ AT3 AT3 AT3 AT3 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT3 AT2 AT3 AT3 AT2 AT3 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT2 AT3 AT3 AT2 AT3 AT3 AT2 AT3 AT3 AT3 AT3 AT3 AT3 AT3 AT3 AT3 AT2 AT3 AT3 AT3 AT3 AT3 AT3 AT3 AT3 AT3 AT3	4 Alg r R Or/R Dect Open Ara At A SAVV APR Muld APR Muld APR Muld APR Paul APR Muld APR Paul APR	8P7455255 56544635 56 25546585463765354
2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2166 2167 2170 2171 2172 2173 2174 2175 2176 2177 2178 2179 2181 2182 2183 2184 2186 2187 2188 2189 2190 2191 2192 2193	Sum Dice Visualising Fraction Squares Some Sums for your Mind w/s Turning Green w/s Permutating Tricubes Folding Fractions Shape Names w/s Angles and Triangles Geometry Facts Information Displayed Matching Equations Range of Area Cube Root Calculator Pop of Britain 1880 and 1980 Shape Up Pie Chart Match w/s Two Down Unmarked Angles w/s The Mode w/s Grouping Data Talking (poster) Population Projections Volumes Shakes and Adders Big Hand Big Foot? Shongo Networks Using Standard Form Powers of Integers Missing Pieces w/s Pythagoras Plus Population Pyramids Strange Dice Game Twice as Many Calculator Graphs Solving Quadratic Equations Number Square Words w/s	AT2 AT3 AT4 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT3 AT4 AT5 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7 AT7	Add Mix Pra Mix S Pra Mix S Pra P P D Grand AID	6567/28556 5 8867654647 555 5788 /287437P3	2253 2254 2255 2256 2257 2258 2259 2261 2262 2263 2264 2265 2266 2267 2268 2269 2270 2271 2272 2273 2274 2275 2276 2277 2278 2279 2280 2281 2283 2284 2285 2286 2287 2280 2281 2283 2284 2285 2286 2287 2281 2283 2284 2285 2286 2287 2281 2283 2284 2285 2286 2287 2280 2281 2283 2284 2285 2286 2287 2280 2281 2283 2284 2285 2286 2287 2280 2281 2283 2284 2285 2286 2287 2280 2281 2283 2284 2285 2286 2287 2280 2281 2283 2284 2285 2286 2287 2288 2289 2280 2281 2283 2284 2285 2286 2287 2286 2287 2288 2289 2280 2281 2283 2284 2285 2286 2287 2286 2287 2288 2289 2289 2289 2289 2280 2281 2289 2289 2289 2280 2281 2280 2280	Calculator Brackets Adding One Matching Fractions w/s Right Angled Triangular Prisms Substituting into Formulae Multiplication Flags w/s Shape-Tiles w/s Find the Route w/s Spreadsheet Squares Plus and Minus Grids w/s Rational Numbers Irrational Numbers Introducing Ratio Logo is Amazing Amazing Logo Measuring Pencils I've got the Power Lines, Regions and Inequalities Looping Chains abc w/s Algebra Problems Curvy Tiles in LOGO Brackets Mapping Jigsaw w/s Island Game Equal Angles Simultaneous Match Jumping BoxN (SENSE/NO) Quadrants and Squares (DIME) Add & Sub Squs & Quads (DIME) Algebra Tak-Tiles on a Grid (DIME) A New Unit of Area (DIME) Comparing Areas (DIME) Towers (box) Negative Sequences	AT2 AT2 AT3 AT2 AT3 AT2 AT2 AT3 AT2 AT3 AT2 AT3 AT3 AT3 AT3 AT3 AT3 AT3 AT3 AT3 AT3	Equix Fra V Equix And Mix O O Rating Band And And And And And And And And And A	6 6 3 5 8 4 1/2 3 6 3 8 P 5 4 5 4 8 7 5 5 8 6 7 3 2 3 7 3 4 5 4 6 6 7 7 7 5	2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2369 2370 2371 2372 2373 2374 2375 2376 2377 2378 2379 2380 2381 2382 2383 2384 2385 2386 2387 2388 2389 2390 2391 2392 2393 2394	End of level Review End of level Review Matching Algebraic Exps w/s Angle Fit w/s Approximate Solutions Rotational & Line Symmetry Review Right-angle or not? Decimal Routes w/s Conversion Pack 1 Decimal Playing Cards Higher Decimal Win Decimal Difference Sixteen Quadrilaterals Matching Decimals Decimal Sort Conversion Pack 2 Rounding to 10 Powers of Ten Flags w/s Queens (MOVE) Equivalent Fractions Pairs Polygons in Circles Maths in Your Head TenSprint(NUM) Matching Fractions (NUM) Number Lines (NUM) Number Lines (NUM) Areas of Polygons w/s Solid Expressions Angles in a Regular Hexagon w/s Nine Nine Nine Multiplication Review Multiples of Ten w/s Six Pyramids Percentages Puzzles w/s Consecutive Products Matching Weights w/s Sensible Answers Equivalent Pairs (ENRICH) Make that Number (ENRICH)	AT2/3/ AT2/3/ AT2/3/ AT2 AT3 AT3 AT3 AT3 AT2 AT3 AT3 AT2 AT3 AT3 AT2 AT3 AT3 AT2 AT3 AT3 AT3 AT3 AT3 AT3 AT3 AT3 AT3 AT3	4 Alg r/R A APr/R Deat ODESh/R	8P7455/255 56544635 56 /255465854637653545
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2400	Circle Cut w/s	AT3	CiM	8
2401	Play Your Cards Right	AT2	PNo	3
2402	Equivalent Fractions Sort w/s	AT2	Fra	5
2403	Missing the Point	AT2	Dec	5.

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Network 1 – 5

April 2001

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The grids below are designed to aid the recording of student assessment over a period of time.

Ini	tal Teacher A	Assessme	nt					
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	Place Value/ Number Systems 19-Piece Jigsaw 1556	Ordering and Rounding Guess (SENSE/NO)	Powers and Roots	Properties of Number	Directed Number	Fractions Halves and Ouarters	Decimals	Percentages	Ratio	Addition Pegboard Sums	Number Pictures 0457	Subtraction Subtracting 0464
Levels 1/2	The Higher the Better 2195 Box (SENSENO) 1625 Hexagon Puzzle w/s 2305 Number Sort w/s 2110	1605		Even Animal W/s 1862 Odd Animal W/s 2147 Joining Odds and Evens W/s 1359 Evens W/s 0868 Joining Multiples W/s 1358		w/s 1355 Something and a Half w/s 2252				Tens 1417 Making Ten 0248 How Many Ways? 0249 Adding Numbers 0458 Adding Shapes 0459 Triangle Sums Game 2307 Birthday Dates 2003	Bowling Tom 0353 TenSprint (NUM) 2377 10 Search w/s 2212 5p a Line 2227 £1 Search w/s 2153 How Much? 1356 Making 25p 2205	Differences Game 1520 Subtract 0467
Level 3	Filing Cards w/s 2131 Largest and Smallest 1663 Sevens Out 1874 (*) Number Square Words w/s 2193 Putting in Order w/s 2239 Egyptian Numbers 0334 Clock Anthmetic 0423	Calculator Guesses 1423 Rounding to 10 2371 Less Than More Than 0250		Pictures from Multiples w/s 1360 Rectangle Patterns 0233 More Rectangle Numbers 0297 Pattern Spotting (PROP/NO Pg16) 1920 Number Clues 1367 Play Your Cards Right 2401 Squares (INVEST Pg4) 2094		Matching Fractions w/s 2256 Shading Fractions w/s 0259 Making One w/s 1959 Equal Fraction Pairs 2105	Using Decimals 2335 Decimals on a Number Line w/s 2332	Out of 100 w/s 2133	Twice as Many 2190	Carry on Adding 0460 100 Search w/s 1849 Number Noughts and Crosses 0885 Number Squares 4 w/s 0030 Multiples of Ten w/s 2387 Fifteen Game 1699 Three in Line 1361	Change 1687 Tom the Bowling Champ w/s 0354 Bowling Tom's Problem 0355 Calculator Problems 0085	Subtraction 0465 Carry on Subtracting 0904
Level 4	A Hundred 0376 Figures for Words 1461	Two Down 2172 BoxN (SENSE/NO) 2284 Matching Decimals 2368	Square Numbers 0298 Triangle Numbers 1 0220 Pegs in Squares 2047	Factors 0307 Tnominoes 0474	Hot and Cold wis 2045 Boxes w/s 1799	Hexagons W/s 0396 Fractions 4 W/s 0058 Fraction 5 Fraction 5 Fraction 5 Fraction 5 Fraction 5 Fraction 6 Fraction 7 Fra	Decimal Soft 2369 Decimal Lines 1426 Decimal Lists 1751 Decimal Search w/s 2338	Percentage Estimation w/s 2199 Percentages of Money w/s 2143 Equivalent Pairs (ENRICH) 2393	Pencils 1710 Walking to School 1649 Numbertines (NUM) 2380	Exactly Ten 1825 Multiples of Ten w/s 2387 Marked Buttons 1632 (2) Number Puzzle 1 0104 Rows and Columns 2245	Oxfam Collection Ws 2107	Darts (NUM) 1747 Sub-zero 1713
Level 5	Roman Numerals 1411 Bengali 55 Piece Puzzle (box) 1858 Which Number? 1786 Bengali Numbers 1913 Magnify (SENSE/NO) 1835	Sensible Answers 2392 GuessN (SENSE/NO) 2285 GuessD (SENSE/NO) 1606 Halving 1316 Higher Decimal Win 2365 Approximate Solutions 2359	Three Squared 0299 Square Pegs in Round Holes 0230 Finding Square Roots 1566 Squanng 0429	Prime Numbers 0308 Multiple Patterns 0330 (2) Sieve of Cardinary (2) Fratosienes 2246 Identify (PROP/NO) 1745 Visiting Every Point (INVEST Pg8) 2202 Point Circles 1727 (*) Triangle Patterns 20221 Black and Red Triangle Patterns 2090 The Factor Game 1655 Common Factors 0310 Factor Finder 0311 Odds and Evens Tables 0240 Summing the Odds 0338	Shakes and Adders 2179 Adding Shrifts w/s 0550 Marbles 0549	Fraction Bings 2300 Finding Equivalent Fractions 2039 Matching Fractions (NUM) 2378 Fraction Wall w/s 0367 Equivalent Fraction Pairs 2374 Folding Fractions 2160 Ordering Fractions (NUM) 2379 Fraction Fiags 1689 (2)	Measuring Windows 1300 Pounds and Pence w/s 1570 Pounds and Pence w/s 1743 Mult & Div by 10, 100 & 1000 w/s 1317 (2) Tenners (NUM) 1834 Missing the Point 2403 Powers of Ten Flags w/s 2372 BoxD (SENSE/NO) 1728 Decimal Routes w/s 2362 Decimal Jigsaw 1749	50% is Half Marks 1572 Make That Number (ENRICH) 2394 25% of What? 2236 Wage Barganning 0792 Percentages w/s 1095	Under a Magnifying Glass 1752 Cooking Numbers 1294 (2) Introducing Ratio 2267 Comparing Ratios 2336 Conversion Pack 1 2363	Magic Circles 2217 (*) Addsupto (NUM) 1767 Odd Add 2053 Domino Sums 1591		I

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ntal, Written and Calculator Methods	Equations, I	Formulae and Identities		Sequenc	es, Functions and Graphs	
ultiplication Division Mixed	Algebraic Structure	Equations	Sequences	Pattern/ Generalisation	Mapping Graphs	Using Gri
ultiplication Bounce gsaw 1430 93) 97) 671		Number Squares w/s 0027	Jumping Jack w/s 0713	Columns 0115	A Secret Code 0241	
Money x Table w/s 1381 339 (2)		Number Squares 2 w/s 0028		100 Square Patterns w/s 0121		
Sum Message w/s issing eces w/s 186	•	Find the Number 1 w/s 0031		More 100 Square Pattems 0151		
Caté Menu w/s 2233		0031		0151		
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x Yable w/s Dividing Find the		Find the	Counting	Nines w/s	TV Drinks	
x Table w/s Dividing Find the 340 (2) Strips Route w/s 2262 x Table w/s Sum and Product Again		Number 3 w/s 0033	0316	0114 Number Words	0171	
w/s Collection w/s 0881 2225 0099 347 (2)			Square Diagonals w/s 1945 (*)	1899 (*)	Cracking the Code w/s 0242 An Even	
nns and Deal the A Number Shajjad's Collection of Things Collection 129 0863 1353 2224			Matchstick Sequences 1312		An Even Code w/s 1733	
Imps w/s Sharing Number Stories Mystery (Calculating Pg 3) 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9			Describing Sequences 2314		Mapping Jigsaw w/s 2278	
mber 2113			Square Spirats 0862		Mapping Rectangles w/s	
341 (2) Success w/s 1636 1635 x Table w/s Dividing 346 (2) counters			Spots in Sequences		w/s 2296	
x Table w/s 1813 348 (2) Short Division Plus and Minus Grids w/s Grids w/s			0313			
735 2264						
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of level review: Number and Algebra 2350 (2)						
x Table w/s Short Sum product 344 (2) Carrying 2004	Venus Clock 0461	Action Equations 1404	Trlangle Spirals 0861	Doubling Patterns w/s	Mapping Puzzle 1668 (2)	Old Oak 0889
x Table w/s 345 (2) Patterns with 11 and 13 Calculating (Calculating (Calculatin	Multiplication Flags w/s 2259	Jump Equations 1405	Sequences of Numbers 0317	0292 Stacking 2128 (*)	Think of a Number 0386	
ultiplication 0164 2116 Underground Underground 0489 390 Signs 1357	Quadrants and Squares (DIME) 2286	Find the Number 4 w/s 0034	Hundred Fit (box) 2303	Tadpoles (MATH PUZ) 1756	Mapping Machines 0173	
! x Table w/s 349 (2) Missing Keya 1462	2200	0034	Sequences in Squares w/s 0346	Circles to Polygons (INVEST Pg10) 2086	A Match for Anyone 0172	
apier's ods Along the 066 Line 1630			Sequences Jigsaw w/s 2310	Nine Nine Nine 2385	0172	
ultiplying 528 Contig 0496			Table Squares w/s 0352			
Ticket Sales (Calculating Pg 11) 2118			Cardioid w/s 0069			
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of level review: Number and Algebra 2351 (2)	Cho.→	And Nove	Patterna in	Citte to A	The	Canaba
782 (2) Division 0518 (2) 4+3 x 2	Short Orders 2209	And Now Swahili 0691	Patterns in Spirals 2320 Negative	Cuts to Pieces 2241 Many Grids Escape (Calculating	The Inverse 0781	Graphs 1115 Time/
olosia Odd One Out 0398 Date of Birth (Calculating Pol 14/19) Three 2124	Beat the Code 2334	Equality and Inequality 1 406	Negative Sequences 2293 Nephroid w/s	1936 (*) Pg 20/21) 2125 (*)	Mapping w/s 0476	Distance Graph 0073
iltiplication 3 and 9 0749 vision 1429 (2) 780 Negati	abc w/s 2274	Puzzles 1081	0470 Dots in Sequences	Mind Reversal 1659 Sections 1307 (*)	Alf, Mike or Leena 0181	
Dividing by Numbers athiptication Guessing 2072 oblem? 1424 350			0314 Patterns (Calculating Pg 12/13) 2119	Mystic Rose w/s 1555 (*)	Domino Pattems 2059	
Decimal Calculator ore Calculator Estimation Problems oblems 1306 0092			2119 Looping Chains 2273 (*)	Frogs (MATH PUZ) 1651 (*)	From Matches to Mappings Wis 2216	
Maximum Get to One negative Remainder 1662 (ENRICH) 390 2395			Calculating Kitty	Chess 0437 Jigsaws 2221 (*)	x for Breakfast 0167	
Target 200 (Calculating oductive Pg 16) alculating 2122			Squidge 0257	2221 (*) Reverse (MATH PUZ) 1608	Flags (DIME)	
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hs		3-D		Shape	Properties of Shape	Angle Properties	Topology	Similarity/ Enlargement	Rotation	Reflection	Translation/ Vectors	Combined Transformations	Co-ordinates	Drawing	<u> </u>
		Eight Cubes 1522		Tak Tiles A (DIME) 0906 (2)	Sam Shape w/s 0493		Oxford Street w/s 2089			Folding Symmetry 0400	Border Patterns 0471	Patterns on a line w/s 2306		Growing Patterns w/s 1942	Us RL Oʻ
		Looking Around w/s 0617		Tak Tiles B (DIME) 0907 (2)	Word Match w/s 2308		2000			Two Folds 0406	Island Game 2279	Maze (MOVE) 1609			Sn Tn 21
		Four Cubes 1867		Tak Tiles C (DIME) 0908 (2)	Interlocking Squares					Symmetry Match w/s 1868	Shape Tiles w/s	Patterns with Squares 0478			Ce 17
		1867		Cutting up Rectangles 0322	(DIME) 1841					Reflect -a-bug 1680	2261	Pattern Pack A (DIME)			Tir 1:
				0322 Tile Patterns 0851	Shapes Jigsaw (DIME) 1842					1680		1908 (4)			Tir 0 {
				0851	What Shapes? w/s 1856							Pattern Pack B (DIME) 1909 (4)			
					Sim w/s 1669										
		Fill the		Dissection 1	Triangle				Turning Pattems	Mirror			Co-ordinate	Envelopes	Ziç
		Shapes (DIME) 1876 (2)		Tak Tiles D	Triangle Pairs 0859				0320	Symmetry w/s 0251			Messages w/s 1758 Co-ordinates 1	Envelopes 0071 Midpoint	Zig 17 Ho O&
		Solids w/s 0404		Tak Tiles D (DIME) 0909 (2)	Diagonals 1384 Find Four				Rotations 0324 Angles: The				0261	Midpoint Sequences w/s 0456 Spirals w/s	w ₁ 23
		Solid Shapes 1322		Fitting 1700 Squares and	Squares w/s 1812 Four Sides				Angles: The Compass 0281					Spirals w/s 1557	Jui 22 Me
		Two by Two 1765		Triangles 0035	2054				Compass Game 1949						Me Ce O:
					Shape w/s 1828										Ma W/t 25 Ab Loi
															Loi 15 24 05
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										End of lo	val ravious St	nape, Space and Measure	manta 2250		но 30
		Tricubes (DIME) 2073	Prism or Pyramid? w/s 1321	Dissection 2 0051	Two Cuts Investigation w/s 1592	Angles of a Triangle 0159	How Many Colours? w/s	Sorting Triangles 1905	Rotation Symmetry Jigsaws 2111	Symmetrical Triangles w/s 1847	Vector Messages 0339	Locate the Error 0695	Co-ordinates 3 0263	Concentric Circles 0394	Acc Me: 00
		Back to Back 1872	Dice 1377	Dissection 3 0052	Rectangles in Circles	Angle Fil w/s 2358	0359 Colouring	1905	2111	Symmetry w/s	Vector Sea 0377	Board Order 1675	Rhino (COORD) 1621	Nets of a Cube 0295	Me: Per 22
		1872 Two Blocks (DIME)	Isometric Drawing 0070	Dissection 4 0053 (3)	1422 (2) Triangles in Circles 1427 (2)		the Dots 1634 (*)			1565	0377	Tetromino 0048	Grids 0853	0295 Prisms and Pyramids 0008	Hot Lon 02
		1878 (3)	0070	Tangram 1 0005	2-Piece		Weaving w/s 1525						Changing Grids w/s 0384		02 Tim 06
		A Red Cube 1523		Tangram Arrows w/s 1299 (2)	Square 0366		How Many Routes? w/s 0424						Cartoon Co-ordinates w/s	Straight Lines w/s 1844 Pentagons	Mai w/s 17
		Half a Cuboid 2071		Spatial Reasoning (DIME) 1896 (3)	Getting into Shape (box) 1791								0264 (2) Co-ordinates 2 0262	1629	Abc Mui 17
				Equilateral Triangle 0040	Matchstick Puzzles 0131								Fishing w/s	Tetrahedron Nets 0349	G∝ 13
				0040											The Rea 14
							_			. End of leve	el review: Sha	pe, Space and Measurem	ents 2351 (3)		_
		Add a Cube or Two (DIME) 1877 (3)	Recognising Solids (DIME) 1334 (4)	Dissection 5 0054	Shape Names w/s 2161	Finding Angles of a Triangle 0235	Networks 0075	Domino 0046	Rotations w/s 0730	Line Symmetry A 1-4 (DIME) 1718	More Vector Messages W/s	Moving Pictures 0432 (2)	Where's that Town? 0481	Octahedron Nets 0484	Roi Mo 13
		Building	Origami Cube 2219	Tangram 3 0007	Hidden Shapes W/s	Angles of a Quadrilateral 0072	Airline Networks 1757	Double Up 1388	Centres of Rotation w/s 0327	Add-a-Square w/s 1717	1309 (2)	Alphabet Symmetry w/s 2023	Ali Co-ordinales 0494	Ruler, Pencil and Compass 0732	
		with Tricubes (DIME) 2074		Hexagon Dissection 0411	0697 Visualising	About Angles 0039	Routey 0495		Wheels 1352	Symmetry Codes w/s 2035		Rotational and Line Symmetry Review	Lines (COORD) 1641	Equilateral Construction 1287	
		4 Cube Solids 1524 (2)		Tangrams (MA Poster) 0778	2155 Sixteen Quadrilaterals	Angles in a Regular Hexagon w/s 2384	Nodes w/s 0341			Reflection 0709 Adding Counters		2360		Perpendicular Bisectors 0211	
		Tricube Plans (DIME) 2075		7 Piece Tangram 0105 (2)	2367 (*) Hexiamonds	Angles of a Polygon 0267	Inside or Outside? 0452			Counters w/s 1914 Mirror Match				Bisecting an Angle 0212 (2)	
				Regular Tilings 1 (DIME) 1889 (4)	2231 Identikri 1698	Exterior				Mirror Match (DIME) 1866 (3) Line Symmetry B				0212 (2) Islamic Designs 2063	
				Tangram Teasers 0348	Midpoints 0455 (*)	Angles of Polygons 0268				1-3 (DIME) 1892 (2)				2063	
				0348 Squares Tangram 0721	`,	Equal Angles (DIME) 1331 (2)				Line Symmetry 1954					
				U-21		Fold it 0809				Rangoli Pattems 2309					
	_					Missing Angles w/s 2330				. End of leve	el review: Sha	pe. Space and Measurem	ents 2352 (2)		_

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		Measurements an	Surface	tion				Co	Planning & ollecting Dat	ta Repre Interp	cessing, esenting & reting Data Analysing & Interpreting		bability	
remen	Area/ t Perimeter	Circle Measurem	Area/ nent Volume	Angle .	Trigonometry		Logic and Sets		Collecting Data	Dispiaying Data	Data	Probability		<u> </u>
	Which has the Largest Area? w/s 2230		How Many Cubes? 1722	Right-angle or not? 2361			Turning Green w/s 2158			Favourite Colours w/s 0448	It's Raining 0857	Colouring Triangles 0852		
	How Many Centimetre						Mare Sorting 0244							7
¥S	Squares? w/s 1919 What is the						Which Card is Missing? 1839							
•	Perimeter? 2238						Jobs in Order							S
(2)							1376							P
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. 3	Area 1 0022			Equal Angles 2280			Find the Uncle w/s 1703		Vehicle Survey	People in Villages 0864	Handspan 2210 (*)	Likely or Unlikely? 2034	Turning the Cards 2313	-
i.	Area 3 0024			2280 Right-Angles 0286			One Difference		w/s 0272 (2)	0864	Favourite Ice Cream 2304	2034	2313	
.er	Eight Squares 1628			0200			Logichains 0428				2001			
	Rectangles w/s 0178						Two Loops 0579							3
e ghts	Perimeter 0854						Venn Diagrams 0245							6
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ry														
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	Area 2 0023	It's not Fair! 2146	Layers 1750	Angle 90° (ANGLE) 1721			Three by Three 1848 (*)	Which Set?			Hot and Cold (Calculating Pg 15) 2121	Logical Kitty 1690	Experiments 0290	
	Twelve Inch Perimeter 1413		Block Problems 1436	Measuring Angles 0775			All Change 0475	Which Set? 0291 Three in a Line			The Mode w/s 2174	Shading strips 1845 (★)	Rolling two dice w/s 0288	
	The Same Area 0860			Drawing Angles 0776			Counter Puzzle 0123	1301 3 in 1 Maze			The Median 2329		Strange Dice Game 2189	4
	Which is Larger? 0185			Logo is Amazing 2268			Out of Line 0133	(poster) 2037			The Mean 1409		Pizza or pasta? 2319	6
'airs	Silver Earrings w/s 1824			2268			Hopslide (MATH PUZ) 1755	Problem 1304					Lucky Dip 1643	>
,	Area 4 0025						Self-Portrait w/s 1627						Fair Play 2017	O
sswork							Find the Stranger 0870						How Likely? 2152	
ter (2)							Three Loops 0585	1						
=	Pantomino	Cinnatana	Votumes	Amazina							Data 2351 (2)		Mathatia tha	<u>.</u>
(*)	Pentomino Puzzles 1927 (2)	Circumference 0392 (2) Making	Right Angled	Amazing Logo 2269			Boal (MATH PUZ) 1626 (*)		Big Hand Big Foot? 2181	Feeling Hungry? 1792	Testing Dice 2198	Which Switches? 0694	What's the Probability? 1132	
	Area and Perimeter 0119	Making Circles 2142	Triangular Prisms 2257	Snooker (ANGLE) 1624			Logical Kity 1615		Sampling Shoes 1292	Information Displayed 2164	Statistics 3 Review 0897 (2)		What Can I Wear? 0453	
	Right Angled Triangles w/s 0168	All About Circles 2083	Centicube Surprise 1720	Satellite Signals w/s 0777			Who's Who? 0727		Is it true? 2033 (*)	Pie Chart Match w/s 2171	Population Projections 2177		Four Beads (DIME) 2011 (2)	13
	Areas of Polygons w/s 2382			Angle 360° (ANGLE) 1787			Logic Maps 0677			Pie Charts for Breakfast 2200	Code Breaking 0808			
	Make Haif 1741 (2)			Angle Estimation 0772			Who is the Schoolkeeper? 1897							Ve
	Half a Rectangle 0169			Free Hand Angles 0788			What's the Difference? w/s 2088							eV
	U169 Area of a Triangle U166			0788 Radar w/s 0510			A Hungry Death? 0674							Ĭ
	01 66			Bearings 2302			Hals (MATH PUZ) 2327		•					
					1			_		11	D-4- 0050 (0)			1

End of level review: Handling Data 2352 (2)

Using and applying mathematics

The assessment criteria below are to be used to assess Using and applying mathematics in the context of Number and algebra and Shape, space and measures. Separate assessment criteria must be used for assessing Handling data at Key Stage 4.

Level	Making and monitoring decisions to solve problems	Communicating mathematically	Developing skills of mathematical reasoning	Mark
1	Candidates use mathematics as an integral part of classroom activities.	Candidates represent their work with object or pictures and discuss their work.	Candidates recognise and use a simple pattern or relation ship, usually based on their experience.	
2	Candidates select the mathematics for some classroom activities.	Candidates discuss their work using familiar mathematical language and are beginning to represent it using symbols and simple diagrams.	Candidates ask and respond appropriately to questions including 'What would happen if?"	
3	Candidates try different approaches and find ways of overcoming difficulties that arise when they are solving problems. They are beginning to organise work and check results.	Candidates discuss their mathematical work and are beginning to explain their thinking. They use and interpret mathematical symbols and diagrams.	Candidates show that they understand a general statement by finding particular examples that match it.	
4	Candidates are developing their own strategies for solving problems and are using these strategies both in working within mathematics and in applying mathematics to practical contexts.	Candidates present information and results in a clear and organised way, explaining reasons for their presentation.	Candidates search for a pattern by trying out ideas of their own.	
5	In order to carry through tasks and solve mathematical problems, candidates identify and obtain necessary information; they check their results, considering whether these are sensible	Candidates show understanding of situations by describing them mathematically using symbols, words and diagrams.	Candidates make general statements of their own based on evidence they have produced and give an explanation of their reasoning.	
6	Candidates carry through substantial tasks and solve quite complex problems by breaking then down into smaller, more manageable tasks.	Candidates interpret, discuss and synthesise information presented in a variety of mathematical forms. Their writing explains and informs their use of diagrams.	Candidates are beginning to give a mathematical justification for their generalisations; they test them by checking particular cases.	,
7	Starting from problems or contexts that have been presented to them, candidates introduce questions of their own, which generate fuller solutions.	Candidates examine critically and justify their choice of mathematical presentation, considering alternative approaches and explaining improvements they have made.	Candidates justify their generalisations of solutions, showing some insight into the mathematical structure of the situations being investigated. They appreciate the difference between mathematical explanation and experimental evidence.	
8	Candidates develop and follow alternative approaches. They reflect on their own lines of enquiry when exploring mathematical tasks; in doing so they introduce and use a range of mathematical techniques.	Candidates convey mathematical meaning through consistent use of symbols.	Candidates examine generalisations or solutions reached in an activity, commenting constructively on the reasoning and logic employed, and make further progress in the activity as a result.	:
tional	Candidates analyse alternative approaches to problems involving a number of features or variables. They give detailed reasons for following or rejecting particular lines of enquiry.	Candidates use mathematical language and symbols accurately in presenting a convincing reasoned argument.	Candidates' report includes mathematical justifications, explaining their solutions to problems involving a number of features or variables.	
Exceptional Performance	Candidates consider and evaluate a number of approaches to a substantial task. They explore extensively a context or area of mathematics with which they are unfamiliar. They apply independently a range of appropriate mathematical techniques.	Candidates use mathematical language and symbols accurately in presenting a concise reasoned argument.	Candidates provide a mathematically rigorous justification or proof of their solution to a complex problem, considering the conditions under which it remains valid.	

The SMILE 2001 Network

The 2001 SMILE Network reflects the Mathematics National Curriculum 2000 and the KS3 Framework for Teaching Mathematics 2001. The Network is intended to assist teachers in planning and recording a scheme of work for each student according to their mathematical needs.

The Network can be used as a formative record of the student's progress throughout Key Stages 3 and 4 and as an aid to summative teacher assessment at the end of Key Stage 3 because the SMILE activities are arranged to reflect the sections of the Programme of Study.

A student's Network provides evidence of the extent to which the Programme of Study has been covered. The final decision about which Level Description best fits the student should be made in the light of work satisfactorily completed and understood and the teacher's knowledge of the student's mathematical ability.

The Inside of the SMILE Network - The programmes of study for mathematics

The SMILE Network contains a variety of different codes which are intended to provide help for teachers when setting work for a student. These are explained below.

World View 1886

Activities which require thought and planning before being set for students

Algebra

A SMILE activity which is a worksheet - found in the SMILE Worksheet Pack.

Match w/s 2203 Written in lower case letters.

Target 200 (Calculating Pg 16)

A SMILE activity which can be found in SMILE 1783 Calculating Booklet, page 16

Written in lower case letters in brackets.

2114

A SMILE activity which is not usually stored with the workcards or worksheets.

Hundred Fit (box) 2303

Written in lower case letters in brackets, e.g. (poster).

Solve it 0740 (2)

A SMILE activity. The number inside a bracket indicates a longer activity. The

number gives a guide to the approximate expected length of the activity.

Up the Stairs 2185 (*)

A SMILE activity. Either investigative or practical where the work can only be

assessed after the activity has been completed.

Comparing Areas (DIME) 2291 Activities from other publishers and SMILE software are identified by the source written in **upper case letters** in brackets. Full details of all these are found on the

SMILE Commercial References Sheet, available from SMILE Mathematics.

The Outside of the SMILE Network

Assessment Grids

To aid the recording of:

- NFER results
- termly assessment and attainment grades
- individual action targets
- SEN and IEP's

Using and applying mathematics criteria reflect the three stands for Key Stage 4.

Other Resources

SMILE resources which are:

- Teacher Resources
- Support materials for students
- Additional resources



Inital Teacher Assessment

Network 4 - 7

April 2001

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The grids below are designed to aid the recording of student assessment over a period of time.

	en e					Key Stage 2
Key Sta	age 3 Asse	ssment	1	1	1	
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Year /						
7 6 2 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0						Key Stage 3
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Key Stag	ge 4 Asses	sment				
v,	programment		1			Target Grade
Year 10	40 4-10 A-10 PATE A-10 PATE IN THE REAL PROPERTY.					
		_				Predicted Grade
Year 11						Grade

		e, Ordering ounding		Numbers s, Powers a			-	m ————— mals, Perce Proportior	ntages, Rat I	io and		Number O	perations,
	Place Value/ Number Systems A Hundred 0376	Ordering and Rounding Two Down 2172	Square Numbers	Properties of Number Factors 0307	Directed Number	Fractions Hexagons Ws	Decimals Decimal Sort		Percentages Percentage Estimation	Ratio Pencils 1710	Addition Exactly Ten	Oxtam Collection	Subtraction Darts (NUM)
Level 4	Figures for Words 1 461	BoxN (SERSE/NO) 2284 Matching Decimals 2368	O298 Triangle Numbers 1 O220 Pegs In Squares 2047	Trominoes 0474	2045 Boxes w/s 1799	Practions 4 w/s 0058 Fraction Families 2097 Equivalent Fractions 0333 Wall (SENSE/NO) 1730 Fractions 3 w/s 0057	Sort 2369 Decimal Lines 1426 Decimal Lists 1751 Decimal Search w/s 2338		w/s 2199 Percentages of Money w/s 2143 Equivalent Pars (ENRICH) 2393	Walking to School 1649 NumberLines (NUM) 2380	Multiples of Ten w/s 2387 Marked Buttons 1632 (2) Number Puzzle 1 0104 Rows and Columns 2245	w/s 2107	1747 Sub-zero 1713
Level 5	Roman Numerals 1411 Bengali SS Piece Puzzle (box) 1858 Which Number? 1786 Bengali Numbers 1913 Magnify (SENSE/NO) 1835 Minimax (SENSE/NO) 1729	Sensible Answers 2392 GuessN (SENSE/NO) 2285 GuessD (SENSE/NO) 1606 Halving 1316 Higher Decimal Win 2365 Approximate Solutions 2359	Three Squared 0299 Square Pegs in Round Holes 0230 Finding Square Roots 1566 Squaring 0429	Prime Numbers 0308 Multiple Patterns 0330 (2) Sieve of Eratostenes 2246 Identify (PROP/NO) 1745 Visiting Every Point Circles 1727 (*) Triangle Numbers 2 0221 Black and Red Triangle Patterns 2090 The Factor Game 1655 Common Factors 0310 Factor Finder 0311 Odds and Evens Tables 0240 Summing the Odds 0338	Shakes and Adders 2179 Adding Shifts w/s 0550 Marbles 0549	Fraction Bingo 2300 Finding Equivalent Fractions 2039 Matching Fractions (NUM) 2378 Fraction Wall w/s 0367 Equivalent Fraction Pairs 2374 Folding Fractions 2160 Ordering Fractions (NUM) 2379 Fraction Flags 1689 (2)	Measuring Windows 1300 Pounds and Pence w/s 1570 Mult & Div by 10 100 & 1000 w/s 1317 (2) Tenners (NUM) 1834 Missing the Point 2403 Powers of Ten Flags w/s 2372 BoxD (SENSE/NO) 1728 Decimal Roules w/s 2362 Decimal Jigsaw 1749	1484 (2)	50% is Haif Marks 1572 Make That Number (ENRICH) 2394 25% of What? 2236 Wage Bargaining 0792 Percentages w/s 1095	Under a Magnifying Glass 1752 Cooking Numbers 1294 (2) Introducing Ratio 2267 Comparing Ratios 2336 Conversion Pack 1 2363	Magic Circles 2217 (*) Addsupto (NUM) 1767 Odd Add 2053 Domino Sums 1591		
Level 6	Urdu Multiples 1875 Chinese Number Puzzle (box) 1754 Which Scripts? (poster) 1931	Problems (Calculating Pg 22/23) 2126 Decimal Place Match w/s 2398	Power 0388 (2) Power Match w/s 2019 The Root of the Problem 2151 Squares, Cubes and Roots w/s 2095 Cube Root Calculator 2168	Tum the Tables 1394 (2) Factor (PROP/NO) 1708 Define (PROP/NO) 1746 Multiplication Table Patterns 1395 (2) Prime Factors 0331 Number Names 1618	Adding Directed Numbers 0516 Positive or Negative? 0884	Fraction squares 2156 Tower (SENSE/NO) 1666 Who Won? 0443 Adding One 2255 Route Six 1737 Adding Fractions 0402 Fraction Sort 0683 Fraction Wall 2 1528	Fractions to Decimals Match w/s 2223 Decimal Difference 2366 Target 100 1631 Digit Division 1724 Decimal Flags w/s 2242		S4% is a little more than Half Marks 2004 Percentage Puzzle w/s 2389 Marks to Percentages w/s 1096 Fractions to Percentages 1097	Ratio Problems 1709 (2) Conversion Pack 2 2370 Similar Rectangles? 2134 Number Lines D (NUM) 2381 Car Trial Results 1696			
Level 7	Hindi Additions 1881 Panjabi Numbers 1937	Significant Figures 1202	Powerful Rules (3) High Powered Matching w/s 2020 Paper Power 0 463 Powers of Ten w/s 0614 x* Experiment 2040	Diagonal Multiples (PROP/NO Pg26) 1950 Consecutives 1319 (*) The Smith Family Circus 1658 (2) The Times' Crossword 0748 (2) Number Challenge 2312 (*) HCF & LCM 1673	Subtracting Directed Numbers 0517 Harder Negative Sequences 2297 Multiplying Directed Numbers 1278 Dividing Directed Numbers 1279	Early Egyptian Fractions 1771 (3) Unit Fraction Patterns 2043	Gelosia for Decimals 1800 Ouarto 1639 Decimal Calculations 0153		Excess Luggage 2024 Percentage Sales 1208	Shrinking Earth 2065 A Mountain Walk 2006 Unibond Mixtures 1716 (2) Jeans 2067 A Millionaire 0791 The Champion Flea 1660 International Paper Sizes 1315 (2)			

- Numbers and the Number System-

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ital, Written and Calculator M	lethods	Equations, Formu			Sequence	s, Function	ns and Graphs	
ultiplication Division Mixed		Algebraic Structure	Equations	Sequences	Pattern/ Generalisation	Mapping	Graphs	Using Gra
	2 Puzzles (Calculating Pps) 2114 (*) Underground 0489	Venus Clock 0461 Multiplication Flags w/s 2259 I Quadrants and Squares (DIME) 2286	Action Equations 1404 Jump Equations 1405 Find the Number 4 w/s 0034	Triangle Spirals 0861 Sequences of Numbers 0317 Hundred Fit (box) 2303 Sequences in Squares w/s 0346 Sequences Jigsaw w/s 2310 Table Squares w/s 0352 Cardioid w/s 0069	Doubling Patterns w's 20292 Stacking 2128 (*) Tadpoles (MATH PUZ) 1756 Circles to Polygons (INVEST Pg10) 2086 Nine Nine Nine 2385	Mapping Puzzle 1668 (2) Think of a Number 0386 Mapping Machines 0173 A Match for Anyone 0172		Old Oak 0889
of level review: Number and Aigeb		Short	And Now	Patterns in	Cuts to Pieces	The Inverse		Graphs
Division 1946 O518 (2) O518 (2) O518 (2) O518 (2) O518	Date of Birth (Calculating Pg 18/19) 2124	Short Orders 2209 Beat the Code 2334 abc w/s 2274 Add and Subtract Squares and Quadrants (DIME) 2287 (2) Anywhere on the Number Line w/s 0849 Re-Grouping 0830 Words won't fail me w/s 2237	Random Code O689 Number Puzzle w's O184 More Than, Less Than 2247 Number Codex O696	Spirals 2320 Negative Sequences 2293 Nephroid w/s 0470 Dots in Sequences 0314 Patterns (Calculating Pg 12/13) 2119 Looping Chains 2273 (*) Calculating Kitty 1613 Squidgeree 0257 Squidgeree 0258 Building Shapes w/s 0383 Staincases 0315 Match Patterns 1313 Triangle Patterns 1432 Trick or Treat 0450 (*) Card Towers 2070	Pieces 2241 Many Grids (PROP/NO Pg25) 1936 (*) Mind Reversal 1659 Sections 1307 (*) Mystic Rose w/s 1555 (*) Frogs (MATH PUZ) 1651 (*) Chess 0437 Jigsaws 2221 (*) Reverse (MATH PUZ) 1608 Star Puzzle 0483 Tricky Sum (MA Poster) 1482 Jumping (MATH PUZ) 1778 Quills (INVEST) 1798 Rose (INVEST)	Inverse O781 Mapping w/s O476 Alf, Mike or Leena O181 Domino Patterns 2059 From Matches to Mappings w/s 2216 x for Breakfast O167 Flags (DIME) 1339 (3) Number Machines (DIME) 1341 (3) x for Tea O187 Simple Mappings (DIME) 1343 (2) Mappings 1378	Mappings to Graphs O182 Graphs to Mappings O183 Drawing the Line O215 y=mx (GRAPH) 1826 Parallel Lines	Graphs 1115 Time/ Distance Graph 0073
readsheet United States (No. 1) (1975	7	2237 The Algebra Game 2321 Algebra Tak-tiles on a Grid (DIME) 2288 (4)	Solve it 0740 (2)		(INVEST) 1731 142857 Times Table 0784 Bounce (DIEE) 1620 (*)		Unes 0430	
ssian hipication 164 The Great Divide 1657 Place Wis 2251 stated of mes 322 Four Signs Wis 1712 Some Sums for Your Mind Wis 2157 Calculator Trail and Error 0155 2, 3, 4, 5 0162 Convince Yourself 2061		Who's Rule Okay? 2243 Algebra Algebra Match w/s 2203 A New Unit of Area (DIME) ClimE) ClimE Cl	Solving Equations 0736 Pattern and Notation (DIME) 1340 (3) Letters for Length 0982 Centigrade and Farenheit 0757 (2) Solving Equations 1136 (2) Solving Equations 1136 (2) Solving Equations 1136 (2) What could x be? 2136	Jugs (MATH PUZ) 1652 Fibonacci Type Sequences 2078 Ans and Exe 2042	The Chinese Triangle 1790 Cubes from Thangles 0783 (*) Pattems in Pascal's Triangle 1438 (2) Shongo Neworks 2182 (*) Investigating Queens (MOVE Pg32) 1785 (*) Predict (PROP/NO) 1691 Counter Hopping Puzzle 0344 Rectangle Dagonal 0439	Algebra Puzzie 1412 Inverse Mappings 0837 Inverses 0745 Further Mappings (DIME) 1344 (2) Quadratic Mappings (DIME) 1855 (3)	Drawing the Curve 2018 Mappings and Graphs (DIME) 1342 (4), Equations and Graphs 0744 Solving by Graphs 0743 (2) Straight Line Graphs 0817 (2) Simultaneous Equations from Graphs 2301 Parallets (GRAPH) 1820 Calculator Graphs 2191 Lines, Regions and Inequalities 2272 Simultaneous Match 2281	Helicopter Photographs 1818 (2 Overtaking 1821 Time Distance Graphs 1127

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		Tricubes (DIME) 2073	Prism or Pyramid? w/s 1321	Dissection 2 0051	Two Cuts Investigation w/s 1592	Angles of a Triangle 0159	How Many Colours? w/s	Sorting Triangles 1905	Rotation Symmetry Jigsaws	Symmetrical Triangles w/s 1847	Vector Messages 0339	Locate the Error 0695	Co-ordinates 3 0263	Concentric Circles 0394	Acc Mei 00
		Back to Back	Dice 1377	Dissection 3 0052	Rectangles	Angle Fit w/s 2358	0359 Colouring	1000	2111	Symmetry w/s	Vector Sea	Board Order 1675	Rhino (COORD) 1621	Nets of a Cube 0295	Mea Per 22
		1872	isometric Drawing	Dissection 4 0053 (3)	1422, (2)		the Dots 1634 (*)			1565	0377	Tetromino 0048	Grids 0853	Prisms and	Hov Lon 02
		Two Blocks (DIME) 1878 (3)	0070	Tangram 1 0005	Triangles In Circles 1427 (2)		Economical Weaving w/s 1525						Changing Grids w/s	Pyramids 0008	02 Tim 06
		A Red Cube 1523		Tangram Arrows w/s 1299 (2)	Square 0366		How Many Routes? w/s 0424						O384 Cartoon Co-ordinates w/s	Straight Lines w/s 1844	Mat w/s
		Half a Cuboid 2071		Spatial Reasoning (DIME)	Getting into Shape (box) 1791								0264 (2) Co-ordinates 2	Pentagons w/s 1629	17 Aba Muc
				1896 (3) Equilateral	Matchstick Puzzles 0131								0262 Fishing w/s 1379	Tetrahedron Nets 0349	17 G∝ 13
				Equilateral Triangle 0040	0.0.								13/9		The Rea 14
		==								. End of leve	el review: Sha	ape, Space and Measureme	nts 2351 (3)		14
		Add a Cube or Two (DIME) 1877 (3)	Recognising Solids (DIME) 1334 (4)	Dissection 5 0054	Shape Names w/s 2161	Finding Angles of a Thangle 0235	Networks 0075	Domino 0046	Rotations w/s 0730	Line Symmetry A 1-4 (DIME) 1718	More Vector Messages w/s 1309 (2)	Moving Pictures 0432 (2)	Where's that Town? 0481	Octahedron Nets 0484	Roc Mo 13
		Building with Tncubes (DIME) 2074	Origami Cube 2219	Tangram 3 0007 Hexagon Dissection	Hidden Shapes w/s 0697	Angles of a Quadrilateral 0072	Airline Networks 1757	Double Up 1388	Centres of Rolation w/s 0327	Add-a-Square w/s 1717	1309 (2)	Alphabet Symmetry w/s 2023	All Co-ordinates 0494	Ruler, Pencil and Compass 0732	
		4 Cube Solids		O411 Tangrams (MA Poster)	Visualising 2155	About Angles 0039 Angles in a	Nodes w/s		Wheels 1352	Symmetry Codes w/s 2035 Reflection 0709		Rotational and Line Symmetry Review 2360	Lines (COORD) 1641	Equilateral Construction 1287	
		1524 (2) Tricube Plans (DIME) 2075		0778 7 Piece	Sixteen Quadrilaterals 2367 (*)	Regular Hexagon w/s 2384	Inside or Outside? 0452			Adding Counters w/s 1914				Perpendicular Bisectors 0211	
		2075		Tangram 0105 (2) Regular Tilings 1	Hexiamonds 2231	Angles of a Polygon 0267	0.02			Mirror Match (DIME) 1866 (3)				Bisecting an Angle 0212 (2)	
				1889 (4)	Identikit 1698 Midpoints	Exterior Angles of Polygons 0268				Line Symmetry B 1-3 (DIME) 1892 (2)				Islamic Designs 2063	
				Tangram Teasers 0348	0455 (*)	Equal Angles (DIME) 1331 (2)				Line Symmetry 1954					
				Squares Tangram 0721		Fold it 0809				Rangoli Patterns 2309					
						Missing Angles w/s 2330									
		Wedges 1 (DIME) 1882 (3)	Piaited Cube w/s 0098	Tessellations of Quadrilaterals	Is It Rigid? 0340	Finding Exterior Angles 0269	3-D Frameworks	Shapes that can	Rotational Symmetry 1955	Using a Mirror (DIME) 0581 (3)	Translation (2)	Turning and Toppling (OIME)	Locate (COORD)	Cuboid Nets 0719	How 08:
		1882 (3) More Than Two Blocks	Tetra-flexagon 0145 (2)	0326 (2) Regular Tilings 2 (DIME)	Tangled Quadrilaterals 1764	0269 Versa-Tiles 1419 (2)	1947 Traversable? 0426	grow w/s 1759	Rotation	0581 (3) Reflect w/s 0577	Vector Match 2228	1336 (5)	1715 3 in a line (COORD)	Start with 60° 2311	
		(DIME) 1880 (3)	Building on a Square (DIME)	1890 One Straight	Shape Up 2170	Angles from Tessellations	Ealing Broadway	Scale Factor 0838 (2)	Rotate This Way	Tricube Symmetries	Race Track w/s 0725		1836 Elephant (COORD)	The Circumcircle 0213 (2)	
		Soma Solids 1672 (2)	2076 Sketching Solids (DIME)	1760	Four Tnangles 1772	0284	1958 (±)		0839	2139 Symmetrical	All out of line 0144		(CÓORD) 1607	Inscribed Circle 0232	
		Tricube Codes 2127	(DIME) 1335 (4)	Regular Tilings 3 (DIME) 1891 (4)	Two Triangles 1773	Angles and Triangles 2162 Unmarked				Cross Cut 0560 Points and	Trigg 1398			U232 Compass Constructions	
		3-D Maze (MOVE) 1732		Tessellating Pattems (TARQUIN Poster) 2012	Using a Triangle 0364	Angles w/s 2173				their Images 0255	Queens (MOVE Pg33) 1714			1170 (2) Polygons in Circles w/s	
		Building Cubes 1794		2012	Yes/No 1744 Paper	Angle 4 Review 0877 (3)				Line Symmetry A 5–10 (DIME) 1719 (3)				2375	
		Making a 3 x 3 x 3 Cube (DIME) 2077			Folding 1382 (5)	Acute/Obtuse 0433								Curvy Tiles in Logo 2276 (2)	
		2077			Another w/s 2240	Polygons; Interior Angles 0800 (2)									
		Blue in the Face 2197 (*)	Origami Dodecahedron 2218	Dissection Pairs w/s 1911	Polygon Symmetries 1873 (*)	Angles in a Semi-circle 1935	About Nodes 0342	Four Pentominoes 1928 (2)		Line Symmetry B 4–6 (DIME)	Translations 1934	pe, Space and Measureme Combining Transformations 1561 (2)	nts 2353 (3)	Nets of Pyramids 0720	Less are t 059
		Build and Balance (DIME)		Weaving w/s 1647	1070 (4)	Cyclic Quadrilateral 0165	The inseparables 0492 (*)	Areas of Similar Shapes		1893 (2) Line Symmetry B	Race Game (MOVE) 1654	Shape Sequences 2214 (*)		Spiralling Squares Patterns	•••
		1879 (3) Euler Solids						1559 (2)		7–10 (DIME) 1894 (2)	Journeys 1329	Cube Cuts 0675 (*)		2031 Constructive Designs	
		(MA Poster) 1354 (3)								Reflections (DIME) 1337 (5)	Vectors and Squares 2201	Cross Stitch 2145 (*)		2141 (3)	
		Cutting Corners 2132									Avoiding Each Other			2058 (2) Ellipses by Folding	
		Cut a Cube 223 2									(MOVE Pg30) 1777			Folding 2055 Painled Tyres	
														Tyres 1912 (*)	

End of level review: Shape. Space and Measurements 2354 (2)

) [dling Da	ata]
		Measure	ements and		on				Co	Planning & ollecting Date	a Repre	cessing, esenting & reting Data	Prob	ability	
ment	Area/ Perimeter		Circle Measuremer	Surface Area/ t Volume	Angle	Trigonometry		Logic and Sets		Collecting Data	Displaying Data	Analysing & Interpreting Data	Probability		<u> </u>
	Area 2 0023		It's not Fairl 2146	Layers 1750	Angle 90° (ANGLE) 1721				Which Set?			Hot and Cold (Calculating Pg 15) 2121	Logical Kitty 1690	Expenments 0290	
	Twelve Inch Perimeter 1413			Block Problems 1436	Measuring Angles 07,75			A'l Change 0475	O291			The Mode w/s 2174	Shading strips 1845 (*)	Rolling two dice w/s 0288	_
	The Same Area 0860				Drawing Angles 0776			Counter Puzzle 0123	1301 3 in 1 Maze			The Median 2329		Strange Dice Game 2189	4
	Which is Larger? 0185				Logo is Amaz₁ng			Out of Line 0133	(poster) 2037 An Honourable			The Mean 1409		Pizza or pasta? 2319	
3(12	Silver Earrings				2268			Hopslide (MATH PUZ) 1755	Problem 1304					Lucky Dip 1643	eve
	1824 Area 4 0025							Self-Portrait w/s 1627						Fair Play 2017	D
swork	0023							Find the Stranger 0870						How Likely? 2152	
er (2)								Three Loops 0585	1						
	_						j L	- V		nd of level revi	ew: Handling	g Data 2351 (2)			<u> </u>
)	Pentomino Puzzles 1927 (2)		Circumference 0392 (2)	Volumes 2178	Amazing Logo 2269			Boat (MATH PUZ) 1626 ()		Big Hand Big Fool? 2181	Feeling Hungry? 1792	Testing Dice 2198	Which Switches? 0694	What's the Probability? 1132	
	Area and Perimeter 0119		Making Circles 2142	Right Angled Triangular Prisms 2257	Snooker (ANGLE) 1624			Logical Kitty 1615		Sampling Shoes 1292	Information Displayed 2164	Statistics 3 Review 0897 (2)		What Can I Wear? 0453	
	Right Angled Triangles w/s 0168		All About Circles 2083	Centicube Surprise 1720	Satellite Signals w/s 0777			Who's Who? 0727		ls it Irue? 2033 (★)	Pie Chart Match w/s 2171	Population Projections 2177		Four Beads (DIME) 2011 (2)	10
	Areas of Polygons			1720	Angle 360° (ANGLE) 1787			Logic Maps 0677			Pie Charts for Breakfast	Code Breaking		2011 (2)	<u> </u>
	W/s 2382				1787 Angle			Who is the Schoolkeeper? 1897			2200	0808			P
	1741 (2)				0772			What's the Difference? w/s 2088							
	Rectangle 0169				Angles 0788			A Hungry Death? 0674							4
	Area of a Triangle 0166				Radar w/s 0510 Bearings			Hals (MATH PUZ) 2327							
					2302										
		_					JL		E	nd of level revi	ew: Handline	n Data 2352 (2)			1
	World View 1886	A	Round the Bend 2013	Volume of Cubes 0142	Bearings and Scale Drawings	Surrounding Right Angled Tnangles w/s		Inventing Mazes 2081 (2)		Rumour (Calculating Pg 10) 2117	Secondhand Cars 1295 (2)	Frequency Graphs 1233 (2)	Sidings 0634 (2)	What Chance? 0737	-
	Chocolate Areas 0120	Parallelogram Problems 0227	Circle Coverage	Cuboids from Matchboxes	1434 (2) Pilot (MOVE)	2056 Short, Middle,		The Lewis Family		Which Hand	Headines 2235	,200 (2)	The 3 Coin Problem 0161	Monopoly 0750	
	Rectangle Areas 1320	Shearing a Triangle 0177	2149 Kit Bag 2060	0381 Volumes 2 0143	1667	Long 1902		1770 Counter Placing		Works Hardest? 2138	Olympic Medals 1938			Three Counters (DIME)	(0
	Area of a Parallelogram 0224		2000	0143	Rotation (DIME) 1332 (3)	Checking Pythagoras 0188		0591 Hex			Pie Charts 1101 (2)			2009 Six Beads	
	From Parallelogram to Rectangle							0170 (*) Sets of Signs 1953			(2)			(DIME) 2010	(I)
	0228 Equal Area?							1953 Logi-Puzzle 1302						One Dice (DIME) 1967	6
	w/s 2222 Triangle							Milk Crate 1685						Two Dice (DIME) 1969 (2)	Ψ
	Triangle Problems 0236 (2)							Sort the Cards 0472							
	Shearing Parallelograms 0226	1						A Puzzling Walk (poster)							
	,		Pizza	Valume of	Equiangular	Usina	<u> </u>		E	nd of ievel revi	ew: Handling	Data 2353 (2)		Putting it	ļ
	Square 1686 (*)		Paradise 2150	Cuboids 1257	Spirals 1999 (3)	Using Pythagoras 0190		Master (MATH PUZ) 1653			Best Fit 0574	2208	Forty Towers 0684	Putting it to the lest 2100	
	Polygon Areas 2084		Orbits 0761	Volume of Prisms 1094 (2)	Back Bearings 1435	Looking for Right- Angles 0189		An Islamic Design w/s 1734			Population Pyramids 2188 (2)	Average Pack of Workcards 0805 (3)	Pascal's Thangle 0746 (4)	Probability 1269 (2) Probability	
	Trapezium to Parallelogram 0806			Dipsticks 1861	Journeys 1130 (2)	Pythagoras Problems 0191		Flying Engineers 1766 (2)			Population of Britain 2169 (3)	A Mean Challenge! 2318	Pinba'l Experiments 2207	Kitty 1614 Tossing	/
	The Trapezium 0794			Volumes and Surface Areas of Cylinders 1275 (2)		Six Pyramids 2388 (3)		Log:block Sets 2101				Grouping Data 2175 (2)		Coins (INVEST Pg 38- 40) 2194 (2)	
						Rising Gradients 1917		Think 1706						Numbers Up (DIME)	O
						From A to B 1762 (+)		Who has the Microcomputer? 1898						1968 (2) Five Beads (DIME) 1970 (2)	eV
								In Your Mind 0600						1970 (2)	Y
								Domino Puzzle 0905 (2)							

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Fnd of level review: Handling Data 2354 (3)

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Using and applying mathematics
The assessment criteria below are to be used to assess Using and applying mathematics in the context of Number and algebra and Shape, space and measures. Separate assessment criteria must be used for assessing Handling data at Key Stage 4.

Level	Making and monitoring decisions to solve problems	Communicating mathematically	Developing skills of mathematical reasoning	Ма
1	Candidates use mathematics as an integral part of classroom activities.	Candidates represent their work with object or pictures and discuss their work.	Candidates recognise and use a simple pattern or relation ship, usually based on their experience.	
2	Candidates select the mathematics for some classroom activities.	Candidates discuss their work using familiar mathematical language and are beginning to represent it using symbols and simple diagrams.	Candidates ask and respond appropriately to questions including 'What would happen if?"	
3	Candidates try different approaches and find ways of overcoming difficulties that arise when they are solving problems. They are beginning to organise work and check results.	Candidates discuss their mathematical work and are beginning to explain their thinking. They use and interpret mathematical symbols and diagrams.	Candidates show that they understand a general statement by finding particular examples that match it.	
4	Candidates are developing their own strategies for solving problems and are using these strategies both in working within mathematics and in applying mathematics to practical contexts.	Candidates present information and results in a clear and organised way, explaining reasons for their presentation.	Candidates search for a pattern by trying out ideas of their own.	
5	In order to carry through tasks and solve mathematical problems, candidates identify and obtain necessary information; they check their results, considering whether these are sensible	Candidates show understanding of situations by describing them mathematically using symbols, words and diagrams.	Candidates make general statements of their own based on evidence they have produced and give an explanation of their reasoning.	
6	Candidates carry through substantial tasks and solve quite complex problems by breaking then down into smaller, more manageable tasks.	Candidates interpret, discuss and synthesise information presented in a variety of mathematical forms. Their writing explains and informs their use of diagrams.	Candidates are beginning to give a mathematical justification for their generalisations; they test them by checking particular cases.	
7	Starting from problems or contexts that have been presented to them, candidates introduce questions of their own, which generate fuller solutions.	Candidates examine critically and justify their choice of mathematical presentation, considering alternative approaches and explaining improvements they have made.	Candidates justify their generalisations of solutions, showing some insight into the mathematical structure of the situations being investigated. They appreciate the difference between mathematical explanation and experimental evidence.	
8	Candidates develop and follow alternative approaches. They reflect on their own lines of enquiry when exploring mathematical tasks; in doing so they introduce and use a range of mathematical techniques.	Candidates convey mathematical meaning through consistent use of symbols.	Candidates examine generalisations or solutions reached in an activity, commenting constructively on the reasoning and logic employed, and make further progress in the activity as a result.	
nance	Candidates analyse alternative approaches to problems involving a number of features or variables. They give detailed reasons for following or rejecting particular lines of enquiry.	Candidates use mathematical language and symbols accurately in presenting a convincing reasoned argument.	Candidates' report includes mathematical justifications, explaining their solutions to problems involving a number of features or variables.	
Exceptional Performance	Candidates consider and evaluate a number of approaches to a substantial task. They explore extensively a context or area of mathematics with which they are unfamiliar. They apply independently a range of appropriate mathematical techniques.	Candidates use mathematical language and symbols accurately in presenting a concise reasoned argument.	Candidates provide a mathematically rigorous justification or proof of their solution to a complex problem, considering the conditions under which it remains valid.	

The SMILE 2001 Network

The 2001 SMILE Network reflects the Mathematics National Curriculum 2000 and the KS3 Framework for Teaching Mathematics 2001. The Network is intended to assist teachers in planning and recording a scheme of work for each student according to their mathematical needs.

The Network can be used as a formative record of the student's progress throughout Key Stages 3 and 4 and as an aid to summative teacher assessment at the end of Key Stage 3 because the SMILE activities are arranged to reflect the sections of the Programme of Study.

A student's Network provides evidence of the extent to which the Programme of Study has been covered. The final decision about which Level Description best fits the student should be made in the light of work satisfactorily completed and understood and the teacher's knowledge of the student's mathematical ability.

The Inside of the SMILE Network - The programmes of study for mathematics

The SMILE Network contains a variety of different codes which are intended to provide help for teachers when setting work for a student. These are explained below.

World View 1886

Activities which require thought and planning before being set for students

A SMILE activity which is a worksheet - found in the SMILE Worksheet Pack.

Algebra Match w/s 2203

Written in lower case letters.

Target 200 (Calculating Pg 16)

A SMILE activity which can be found in SMILE 1783 Calculating Booklet, page 16

Written in lower case letters in brackets.

2114

Hundred Fit

A SMILE activity which is not usually stored with the workcards or worksheets.

(box) 2303 Written in lower case letters in brackets, e.g. (poster).

Solve it 0740 (2)

A SMILE activity. The number inside a bracket indicates a longer activity. The number gives a guide to the approximate expected length of the activity.

Up the Stairs 2185 (*)

A SMILE activity. Either investigative or practical where the work can only be

assessed after the activity has been completed.

Comparing Areas (DIME) 2291 Activities from other publishers and SMILE software are identified by the source written in **upper case letters** in brackets. Full details of all these are found on the

SMILE Commercial References Sheet, available from SMILE Mathematics.

The Outside of the SMILE Network

Assessment Grids

To aid the recording of:

- NFER results
- termly assessment and attainment grades
- individual action targets
- SEN and IEP's

Using and applying mathematics criteria reflect the three stands for Key Stage 4.

Other Resources

SMILE resources which are:

- Teacher Resources
- Support materials for students
- Additional resources

Teacher resources from SMILE - in numerical order

The following SMILE materials come as part of either a Full Class Set or a Single Copy Set and are not recorded on the inside of the SMILE Network.

1701 Post Half Posters Good display poster to encourage project work on area and

fractions.

2112 Imaginings A collection of lesson starters and enders, based upon 3-D

visualisation.

2176 Talking Poster Good display poster to encourage mathematical discussion.

2292 Towers (box) A game for revision for Key Stages 3 & 4, based upon Trivial

Pursuit.

2324 Reckonings A collection of lesson starters and enders, based upon

mental mathematics

2376 Maths in Your Head A collection of lesson starters and enders, based upon

mental mathematics

Support materials for students from SMILE - in numerical order

The following SMILE materials come as part of either a Full Class Set or a Single Copy Set and are not recorded on the inside of the SMILE Network.

1783 Calculating Booklet Each activity in this booklet has been referenced on the

SMILE Network from SMILE 2113 to SMILE 2126.

2002 Real Spirals A good resource for project work on spirals.

2096 Fraction Playing Cards A resource for students, also needed for SMILE 2097 and

SMILE 2105.

2163 Geometry Facts

This is referenced on many SMILE activities where students

need to find definitions of shapes and angles.

2226 Number Playing Cards A resource for students which is referenced on many SMILE

activities where students require number cards.

2323 Statisical Inv. Help Book A resource for students.

2364 Decimal Playing Cards A resource for students, also needed for SMILE 2365, SMILE

2366, SMILE 2368 and SMILE 2369.

Additional resources available from SMILE Mathematics

The following SMILE materials do not come as part of the classroom materials, but are for use as whole class lessons, to aid group work and differentiation.

Bridging Units 2 units suitable for Year 7.

Nice Ideas in one place V. 1 & 2 Contains 25 and 20 activities respectively for KS 3 and 4.

Reasonings Contains 27 activities suitable for KS 3.

Revision through Groupwork 9 topics allowing for differentiation.

Whole Class Projects 8 projects, suitable for KS 3 and 4.

Additional resources from SMILE Mathematics for Assessment

The following pack does not come as part of the classroom materials.

Assessment Pack Provides starting activities and diagostic tests for Levels 2 to 6

Resource programs from SMILE Mathematics

The following programs do not come as part of the classroom materials.

1650 Take Part (DfEE) 1796 Plotter (GRAPH) 1903 Numbers (PROP/NO)

1702 Circle (INVEST) 1851 Regions (GRAPH) 2373 Queens (MOVE)

1776 Spirals (INVEST) 1853 Pinball (INVEST)



Inital Teacher Assessment

Network 6 - EP

April 2001

0001 - 2403

The grids below are designed to aid the recording of student assessment over a period of time.

			Key Stage 2
		de partie de la constante de l	
Key St	age 3 Asses	ssment	· · · · · · · · · · · · · · · · · · ·
		1	*
		The Property of the Control of the C	
		The control of the co	Key Stage 3
	20		TA SAT's
ey Sta	ige 4 Assess	sment	}
			Target
			Grade
			Predicted
			Grade

	and r	lue, Ordering rounding	<u>.</u>	rs, Powers a			tions, Decim	i als, Percentages Proportion	, Ratio an	d	:	Number (Operation	ıs,
	Place Value/ Number Systems	Ordering and Rounding	Powers and Roots	Properties of Number	Directed Number	Fractions	Decimals	Percent	tages Ratio	o	Addition		Subtract	tio
	Urdu Multiples 1875	Problems (Calculating Pg 22/23) 2126	Power 0388 (2)	Tum the Tables 1394 (2)	Adding Directed Numbers 0516	Fraction Squares 2156	Fractions to Decimals Match w/s 2223	54% is a little more than Half Marks	Ratio Problet 1709	ms) (2)				_
	Chinese Number Puzzle (box) 1754	Decimal Place - Match w/s	Power Match w/s 2019	Factor (PROP/NO) 1708	Positive or Negative? 0884	Tower (SENSE/NO) 1666	Decimal Difference	2004 Percentag Puzzle	Conve Pack 2 2370	rsion				
10		2398	The Root of the Problem 2151	Define (PROP/NO) 1746	0884	Who Won? 0443	2366 Target 100 1631	2389	Similar Rectan	igles?				
9	Which Scripts? (poster) 1931		Squares, Cubes and Roots w/s	Multiplication Table Patterns 1395 (2)		Adding One 2255	Digit Division	Marks to Percentag w/s 1096	es Numbe (NUM)	er Lines D				
P			2095 Cube Root Calculator	Prime Factors 0331		Route Six 1737	Decimal Flags w/s 2242	Fractions (Percentag 1097	jes Car Tri	al				
eve			2168	Number Names 1618		Adding Fractions 0402	<u>6676</u>		Results 1696	5				
Ψ						Fraction Sort 0683				,				
						Fraction Wall 2 1528								
						1528								
	<u></u>									_				
	Hindi Additions 1881	Significant Figures 1202	Square Roots Investigation 1589	Diagonal Multiples (PROP/NO Pg26) 1950	Subtracting Directed Numbers 0517	Early Egyptian Fractions 1771 (3)	Gelosia for Decimals 1800	Excess Luggage 2024	Shnnki Earth 2065	ng				
	Panjabi Numbers 1937		Powerful Rules 0592 (3)	Consecutives 1319 (*)	Harder Negative Sequences	Unit Fraction Patterns 2043	Quarlo 1639	Percentag Sales 1208	ie A Mour Walk 2006					
_			High Powered Matching w/s 2020	The Smith Family Circus 1658 (2)	2297 Multiplying	20.0	Decimal Calculations 0153		Unibon Mixture 1716	id es i (2)				
			2020 Paper Power 0463	The Times' Crossword 0748 (2)	Numbers 1278				Jeans 2067	•				
Ð			Powers of Ten w/s	Number Challenge	Dividing Directed Numbers 1279				A Millio 0791					
eve			0614 x ^y Experiment 2040	2312 (*) HCF & LCM 1673					The Cr Flea 1660	ampion				
			2040	1075					Interna Paper : 1315	Sizes				
	Atten	Panea M	Von Lamp	Quadratics					Pvthag	Orae				_
	Nim (MATH PUZ) 1604	Range of Area 2167 (*)	Very Large Numbers 0843 (2) Very Small	and Primes 2229				0804	Pythag Dissect 2052					
			Numbers 0844	Rational Numbers 2265					Golder Rectan 0824	q!e				
8			Going Scientific 2041 Using Standard											
6			2183											
evel			I've got the Power 2271											
a			Fibonacci and Square Root Spirals 2000 (2)											
			A Problem of Power 1684 (*)											
			Powers of integers 2184 (*)											
	Cuneilorm Numbers		Squares and Other Powers	Irrational Numbers		What's Recurring?		Percentagi Problems	e Proport 1533	ion				_
	1793 Bi-Fractions		1637	2266 Proof By		2092 (*)		2038	1000	(2)				
•	0414 (±) A Special			Contradiction 1677 Primes and										
– 9	0557 Base -2 1433 (*)			Primes and Proof 0831 (4)										
tiona nanc	Babylonian Method													
Exceptional Performance	1399 (2)													
E Pe														

ntal, Written and Calculator Methods	Equations, Form	nulae and Identities	**	Sequenc	es, Functio	ns and Graphs	
elosia roblems w/s Dividing Investigation 1940 (*) losest Product 725 Dividing Pairs 1726 Using Brackets w/s 1463 Fewest Keys 2022 Tri-Umph 1638 Sum Dice 2154 Getting Closer 1723 One Million (TARQUIN Poster) 1656 alcumaze 738 Repeating Digits 0752 preadsheet quares 263 Quickly to Zero 0760 1711 ISBN's and Errors 1454 (2) Investigation Pairs 2254 Millions 0903 (3) Wising Brackets w/s 1463 Fewest Keys 2022 Million (TARQUIN Poster) 1961 Missing Digit (Calculating Pg 8) 2115 Missing Signs (Calculating Pg 17) 2123	Algebraic Structure Add and Subtract Squares and Quadrants (DIME) 2287 (2) Anywhere on the Number Line wis 0849 Re-Grouping 0830 Words won't lail me wis 2237 The Algebra Game 2321 Algebra Tak-tiles on a Grid (DIME) 2288 (4)	Equations Random Code 0689 Number Puzzle Wis 0184 More Than, Less Than 2247 Number Codex 0696 Solve R 0740 (2)	Sequences Staircases 0315 Match Patterns 1313 Triangle Patterns 1432 Trick or Treat 0450 (*) Card Towers 2070	Pattern/ Generalisation Numbering the Pages 0603 Tricky Sum (MA Poster) 1482 Jumping (MATH PUZ) 1778 Quills (INVEST) 1798 Rose (INVEST) 1731 142857 Times Table 0784 Bounce (DIEE) 1620 (*)	Mapping Number Machines (DIME) 1341 (3) x for Tea O187 Simple Mappings (DIME) 1343 (2) Mappings 1378	Graphs Mappings to Graphs 0182 Graphs to Mappings 0183 Drawing the Line 0215 y=mx (GRAPH) 1826 Parallel Lines 0430	Using Grands No Brakes Bruce 0362
ussian Divide Divide 1657 roduct of rimes 822 Four Signs Ws 1712 Some Sums for Your Mind ws 2157 Calculator Thal and Error 0155 2, 3, 4, 5 0162 Convince Yourself 2061	Who's Rule Okay? 2243 The Algebra Game 2 Algebra Match w/s 2203 A New Unit of Area (DIME) Tak Tiles without a Grid (DIME) (DIME) (2289 (4) (x+1) ² 1665 Matching Algebraic Expressions w 0876 (2) Differences Between Squares 0818 (3) Comparing Areas (DIME) Comparing Areas (DIM	for Length 0982 Centigrade and Farenheit 0757 (2) /s Solving Equations 1136 (2) Solving Inequalities 2253 What could	Jugs (MATH PUZ) 1652 Fibonacci Type Sequences 2078 Ans and Exe 2042	The Chinese Triangle 1790 Hanoi (MATH PUZ) 2326 (*) Patterns in Pascar's Triangle 1438 (2) Shongo Nelworks 2182 (*) Investigating Queens (MOVE Pg32) 1785 (*) Predict (PROPNO) 1691 Counter Hopping Puzzle 0344 Rectangle Diagonal 0439	Algebra Puzzle 1412 Inverse Mappings 0837 Inverses 0745 Further Mappings (DIME) 1344 (2) Quadratic Mappings (DIME) 1855 (3)	Drawing the Curve 2018 Mappings and Graphs (DIME) 1342 (4) Drawing and Graphs 0744 Solving by Graphs 0743 (2) Straight Line Graphs 2301 Parallels (GRAPH) 1820 Calculator Graphs 2191 Lines, Regions and Inequalities 2272 Simultaneous Match 2281	Helicopter Photographs 1818 (r Overtaking 1821 Time Distanc Graphs 1127
Four 4's 0179 (2) Target 24-a Three Digit Problem 2016	Siart with a ² 0734 (3) Identicubes 2215 Operations 0397 (2) Algebra Pairs 1736 (2) Number Jumble 1682	Solving Harder Equations 1137 (2) Pamphlets 0485 (2) Problems 1308 (3) Substituting Into Formulae 2258 Algebra Problems 2275 A Domino Trick 1916 Simple Quadratics 1415 (3)	Digit Sum 0563 Differences 1941 (*) Unpredictable Patterns 2049 Strings 2029	Threes and Sevens 1486 (*)		Rectangles to Regions 0755 Guess Inequality (GRAPH) Defining Regions 2397 2234 Gradient 0789 (2) Matching Equations 2166 Defining Regions 1511 (2) Gradients and Intercepts 2249 Find The Line (GRAPH) 2396 Graph Matching 1707 (2) When x is? 1951 (2)	The 'Smooth Out' Principle 1830 Motor-Cycle Ratios 1697 (;
Factorials! 1305 A Disappearing Act 2130 The Log Button 2051	Two Digit Sums 1396 (2) Equations 1420 Squares 0820 (3) Tak Tile Areas 1323 Changing the Subject 1501 Prove your identity 0819 (2) The 38th Triangle Number 0741 Prove it 0722 Subject of a Formula 1500	Points of Intersection 0756 (3) Solving Quadratic Equations 2192 (3) Pythagorean Triples 1676 (2) Diophantine Equations 1460 (3)	Infinity 1369 (7) Limits 1485 (2) Series Geometrically 1418 (3)	Number Pattern Proof 0782 Geometric Progression 1439 (2) Converging Sequences 1389 (2)	Composite Functions 1543 (2)	Ouadratic Solutions 2140 Matching Graphs 2044 Lineover (GRAPH) 1779 PointAndLines (GRAPH) 1840 Integer Graphs 2028	Using Gradients 1281 Foxes and Chickens (GRAPH) 1852 Party Solutions 2106 Areas Under Graphs 1504 (f) Velocity from Distance Time Graphs 1568 (f) Distance, Velocity and Acceleration 1569

	-		Geome	etrical Reas	oning			,		Transfo	r-, -r		Coordin ates	Construc tion & Loci	;
hs		3-D		Shape	Properties of Shape	Angle Properties	Topology	Similarity/ Enlargement	Rotation	Reflection	Translation/ Vectors	Combined Transformations	Co-ordinates		м
ihs I		3-D Wedges 1 (DIME) 1882 (3) More Than Two Blocks (DIME) 1880 (3) Soma Solids 1672 (2) Tricube 2127 3-D Maze (MOVE) 1732 Building Cubes 1794 Making a 3×3×3 Cube (DIME) 2077	Plarted Cube w/s 0098 Tetra-flexagon 0145 (2) Building on a square (DIME) 2076 Sketching Solids (DIME) 1335 (4)	•	of Shape Is It Rigid? 0340 Tangled	Finding Exterior Angles 0269 Versa-Tiles 1419 (2) Angles from Tessellations 0284 Angles and Triangles 2162 Unmarked Angles w/s 2173 Angle 4 Review 0877 (3) Acute/Obtuse 0433 Polygons: Intenor Angles 0800 (2)	3-D Frameworks 1947 Traversable? 0426 Ealing Broadway 1958 (*)	Shapes that can grow w/s 1759 Scale Factor 0838 (2)	Rotation Rotational Symmetry 1955 Rotation 1112 (2) Rotate This Way w/s 0839	Reflection Using a Mirror (DIME) 0581 (3) Reflect w/s 0577 Troube Symmetrical Cross Cut 0560 Points and their Images 0255 Line Symmetry A 5–10 (DIME) 1719 (3)	Vectors Translation 1123 (2) Vector Match 2228 Race Track w/s 0725 All out of line 0144 Trigg 1398 Queens (MOVE Pg33) 1714	Transformations Tuming and Toppling (DIME) 1336 (5)	Co-ordinates Locate (COORD) 1715 3 in a fine (COORD) 1836 Elephant (COORD) 1607	Cuboid Nets 0719 Start with 60° 2311 The Circumcircle 0213 (2) Inscribed Circle 0232 Compass Constructions 1170 (2) Polygons in Circles w/s 2375 Curry Tiles in Logo 2276 (2)	M HÖ
		Blue in the Face 2197 (*) Build and Balance (DIME) (3) Euler Solids (MA Poster) 1354 (3) Cutting Corners 2132 Cut a Cube 2232	Origami Dodecahedron 2218	Dissection Pairs w/s 1911 Weaving w/s 1647	Polygon Symmetries 1873 (*)	Angles in a Semi-circle 1935 Cyclic Quadrilateral 0165	About Nodes 0342 The inseparables 0492 (*)	Pour Pentominoes 1928 (2) Areas of Similar Shapes 1559 (2)		Line Symmetry B 4-6 (DIME) 1893 (2) Line Symmetry B 7-10 (DIME) 1894 (2) . Reflections (DIME) 1337 (5)	Translations 1934 Race Game	Combining Transformations 1561 (2) Shape Sequences 2214 (*) Cube Cuts 0675 (*) Cross Stitch 2145 (*)	nts 2353 (3)	Nets of Pyramids 0720 Spiralling Squares Patterns 2031 Constructive Designs 2141 (3) Tie w/s 2058 (2) Ellipses by Folding 2055 Painted Tyres 1912 (*)	Let are OE
<u></u> -!	<u> </u>	Wedges 2 (DIME) 1883 (3)	The Other Side 1857		Family of Quadrilaterals 0738	Regular Polygons 0731 (2)		Similar Thangles 2027		End of level Combined Reflections 1562 (2)	el review: Sha Vectmeet (MOVE) 1622	ape, Space and Measuremer Transforming Transples 2148	nts 2354 (2)		_
		1883 (3)	1657		Polygons and Right Angles 1843 (*)	O731 (2) Angles in Circles 2062		Lengths of Similar Objects 1259 (2) Nee Pentominoes 1929 (2) Similanty Problems 1560 Negative Scale Factor 0845 (2)		1302 (2)	Force Meet , 0894 (2) Vector Magnitudes 1013	Matrices and Transformations 0797 (2) Square Jigsaw (box) 1688 (2) Wedges (DIME) 1338 (5) Transformations 1156 (2)			
, ,	ı									End of le	evel review: Si	hape, Space and Measuremo	nents 2355		
		Spheres 1679 (4)			Folding 1681 Identical Halves Ws 1795			Similar Solids 1261 Matrices and Area 1922 (2)	Matrices for Rotations 1456 Combining Rotations 1457	Rellection Matrices Investigation 1 4 5 8	Vectors 1177 More Vectors 1178 (2) Column Vectors 1179 (2) Dividing in a Given Ratio 1011 (2) Vector Areas 2050	Islamic Patterns in Logo 2093 A Transformation Technique 1400 (3) Scale Maps 2085 Isometries 1028 Matrices for Shears Investigation 1459		Minimum Information 1832	

End of level review: Shape, Space and Measurements 2356 (3)

		Measure	ements and		on				Planning & Collecting Dat	a Repre	essing, senting & eting Data	Prob	ability	
ement	Area/ Perimeter		Circle Measurement	Surface Area/ Volume	Angle	Trigonometry		Logic and Sets	Collecting Data	Displaying Data	Analysing & Interpreting Data	Probability		
?	World View 1886	A Parallelogram	Round the Bend 2013	Volume of Cubes 0142	Bearings and Scale Drawings 1434 . (2)	Surrounding Right Angled Triangles w/s 2056		Inventing Mazes 2081 (2)	Rumour (Calculating Pg 10) 2117	Secondhand Cars 1295 (2)	Frequency Graphs 1233 (2)	Sidings 0634 (2)	What Chance? 0737	
	Chocolate Areas 0120	Problems 0227	Circle Coverage 2149	Cuboids from Matchboxes 0381	Pilot (MOVE)	Short, Middle.		The Lewis Family 1770	Which Hand Works Hardesi?	Headlines 2235		The 3 Coin Problem 0161	Monopoly 0750	
	Reclangle Areas 1320	Shearing a Triangle 0177	Kil Bag 2060	Volumes 2 0143	1,667 Rotation (DIME) 1332 (3)	Long 1902 Checking		Counter Placing 0591	2138	Olympic Medals 1938			Three Counters (DIME) 2009	9
	Area of a Paralielogram 0224				1332 (3)	Pythagoras 0188		Hex 0170 (*)		Pie Charts 1101 (2)			Six Beads (DIME) 2010	
	From Parallelogram to Rectangle 0228							Sets of Signs 1953					One Dice (DIME) 1967	Ð
	Equal Area? w/s 2222							Logi-Puzzle 1302					Two Dice (DIME) 1969 (2)	eve
	Triangle Problems 0236 (2)							Milk Crate 1685					1969 (2)	Ľ
	Shearing Parallelograms 0226							Sort the Cards 0472 A Puzzling Walk						
								(poster) 2250 (*)						
_		√					<u></u>		End of level revi	ew: Handling	Data 2353 (2)			
	Square 1686 (*)		Pizza Paradise 2150	Volume of Cuboids 1257	Equiangular Spirals 1999 (3)	Using Pythagoras 0190		Master (MATH PUZ) 1653		Line of Best Fit 0574	Best Marks 2208	Forty Towers 0684	Putting it to the lest 2100	
	Polygon Areas 2084		Orbits 0761	Volume of Prisms 1094 (2)	Back Bearings 1435	Looking for Right- Angles 0189		An Islamic Design w/s 1734		Population Pyramids 2188 (2)	Average Pack of Workcards 0805 (3)	Pascal's Triangle 0746 (4)	Probability 1269 (2) Probability	
	Trapezium to Parallelogram 0806			Dipsticks 1861	Journeys 1130 (2)	Pythagoras Problems 0191		Flying Engineers 1766 (2)		Population of Britain 2169 (3)	A Mean Chailenge! 2318	Pinba'l Experiments 2207	1614	/
	The Trapezium 0794			Volumes and Surface Areas of Cylinders 1275 (2)		Six Pyramids 2388 (3)		Logiblock Sets 2101			Grouping Data 2175 (2)		Coins (INVEST Pg 38- 40) 2194 (2)	_
						Rising Gradients 1917		Think 1706					Numbers Up (DIME) 1968 (2)	9
						From A to B 1762 (*)		Who has the Microcomputer? 1898					Five Beads (DIME)	6
								In Your Mind 0600					1970 (2)	Ĭ
								Domino Puzzle 0905 (2)						
							<u> </u>		End of level revio	ew: Handling	Data 2354 (3)			
	irregular Areas 0812 (2)		DIY Earrings 2032	Solid Expressions 2383 (2)	Directions (DIME) 1333 (4)	Trig Lines 1921 (2)		Blocked (poster) 1788		Histograms 2295	Cumulative Frequency from Grouped Data 1267 (2)	Permutaling Tricubes 2159	Seven Beads (DIME) 1971 (2)	
			Circle Cut w/s 2400	The Biggest Vase 1258 (2)		Opposite, Adjacent and Hypotenuse 2082		Tum it Over 2069			Grouped Data, Reviewed 2325 (2)		Find the Fakes 1670	
			Circle Packing 2103	Cubes 0399 (*)		Pythagoras Plus 2187 (*)		Mastermind 1345			Cumulative Frequency and Quartiles		Probability Kitty 1646	∞
	,					Another Tng Line 2109		Shunting 0477			1007 (2)		Combined Probability 1704 (2)	e
						Using Sine and Cosine 1 2137								eV
						Using Sine and Cosine 2								a
						2144								_
						1			End of level rev	vious Handlin	a Data 2355		1	
			Clover Leaf 0827 (2)	Cones 1541 (2)		Trig for Any Triangle 2220		The Coin Problem 1918 (*)	End of level rev	new: Handlin	Lies, Damned Lies and Statistics		Combined Probabilities from Tree	
			Circles, Triangles and Hexagons 1763 (2)	Packing Balls 2244		Big Wheel 1784		1918 (*)			0882 (2)		Diagrams 1272 (2)	
			Sectors of Circles 0813 (2)	Best Fitting Peg 0595 (*)		Sin and Cos Graphs 1939 (3)							Probably Probable? (INVEST Pg43) 2014	
			Darts Probability 0796 (2)	Optimising 1885		Exploring Sine Curves 2206(*)								nal nce
			Approximation and π 0793 (2)			Thinking in Three Dimensions 1487 (2)								Exceptiona Performanc
			Fabric Designs 2036			1487 (2) Angles Between Planes 1488 (2)								Exce 'erfo
			Grey Areas 2135 (*)			1488 (2) Post Box 0454 (*)								- <u>L</u>
						0454 (*) Trig Problems 1517 (2)								

End of level review: Handling Data 2356

Using and applying mathematics
The assessment criteria below are to be used to assess Using and applying mathematics in the context of Number and algebra and Shape, space and measures.

Separate assessment criteria must be used for assessing Handling data at Key Stage 4.

Level	Making and monitoring decisions to solve problems	Communicating mathematically	Developing skills of mathematical reasoning	Mark
1	Candidates use mathematics as an integral part of classroom activities.	Candidates represent their work with object or pictures and discuss their work.	Candidates recognise and use a simple pattern or relation ship, usually based on their experience.	
2	Candidates select the mathematics for some classroom activities.	Candidates discuss their work using familiar mathematical language and are beginning to represent it using symbols and simple diagrams.	Candidates ask and respond appropriately to questions including 'What would happen if?"	
3	Candidates try different approaches and find ways of overcoming difficulties that arise when they are solving problems. They are beginning to organise work and check results.	Candidates discuss their mathematical work and are beginning to explain their thinking. They use and interpret mathematical symbols and diagrams.	Candidates show that they understand a general statement by finding particular examples that match it.	
4	Candidates are developing their own strategies for solving problems and are using these strategies both in working within mathematics and in applying mathematics to practical contexts.	Candidates present information and results in a clear and organised way, explaining reasons for their presentation.	Candidates search for a pattern by trying out ideas of their own.	
5	In order to carry through tasks and solve mathematical problems, candidates identify and obtain necessary information; they check their results, considering whether these are sensible	Candidates show understanding of situations by describing them mathematically using symbols, words and diagrams.	Candidates make general statements of their own based on evidence they have produced and give an explanation of their reasoning.	
6	Candidates carry through substantial tasks and solve quite complex problems by breaking then down into smaller, more manageable tasks.	Candidates interpret, discuss and synthesise information presented in a variety of mathematical forms. Their writing explains and informs their use of diagrams.	Candidates are beginning to give a mathematical justification for their generalisations; they test them by checking particular cases.	
7	Starting from problems or contexts that have been presented to them, candidates introduce questions of their own, which generate fuller solutions.	Candidates examine critically and justify their choice of mathematical presentation, considering alternative approaches and explaining improvements they have made.	Candidates justify their generalisations of solutions, showing some insight into the mathematical structure of the situations being investigated. They appreciate the difference between mathematical explanation and experimental evidence.	
8	Candidates develop and follow alternative approaches. They reflect on their own lines of enquiry when exploring mathematical tasks; in doing so they introduce and use a range of mathematical techniques.	Candidates convey mathematical meaning through consistent use of symbols.	Candidates examine generalisations or solutions reached in an activity, commenting constructively on the reasoning and logic employed, and make further progress in the activity as a result.	
tional nance	Candidates analyse alternative approaches to problems involving a number of features or variables. They give detailed reasons for following or rejecting particular lines of enquiry.	Candidates use mathematical language and symbols accurately in presenting a convincing reasoned argument.	Candidates' report includes mathematical justifications, explaining their solutions to problems involving a number of features or variables.	
Exceptional Performance	Candidates consider and evaluate a number of approaches to a substantial task. They explore extensively a context or area of mathematics with which they are unfamiliar. They apply independently a range of appropriate mathematical techniques.	Candidates use mathematical language and symbols accurately in presenting a concise reasoned argument.	Candidates provide a mathematically rigorous justification or proof of their solution to a complex problem, considering the conditions under which it remains valid.	
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The SMILE 2001 Network

The 2001 SMILE Network reflects the Mathematics National Curriculum 2000 and the KS3 Framework for Teaching Mathematics 2001. The Network is intended to assist teachers in planning and recording a scheme of work for each student according to their mathematical needs.

The Network can be used as a formative record of the student's progress throughout Key Stages 3 and 4 and as an aid to summative teacher assessment at the end of Key Stage 3 because the SMILE activities are arranged to reflect the sections of the Programme of Study.

A student's Network provides evidence of the extent to which the Programme of Study has been covered. The final decision about which Level Description best fits the student should be made in the light of work satisfactorily completed and understood and the teacher's knowledge of the student's mathematical ability.

The Inside of the SMILE Network - The programmes of study for mathematics

The SMILE Network contains a variety of different codes which are intended to provide help for teachers when setting work for a student. These are explained below.

World View

Activities which require thought and planning before being set for students.

1886

Algebra Match w/s 2203 A SMILE activity which is a worksheet - found in the SMILE Worksheet Pack.

Written in lower case letters.

Target 200 (Calculating Pg 16) A SMILE activity which can be found in SMILE 1783 Calculating Booklet, page 16

Written in lower case letters in brackets.

Hundred Fit

A SMILE activity which is not usually stored with the workcards or worksheets.

Written in lower case letters in brackets, e.g. (poster).

(box) 2303

Solve it 0740 (2)

2114

A SMILE activity. The number inside a bracket indicates a longer activity. The

number gives a guide to the approximate expected length of the activity.

Up the Stairs 2185 (*)

A SMILE activity. Either investigative or practical where the work can only be

assessed after the activity has been completed.

Comparing Areas (DIME) 2291 Activities from other publishers and SMILE software are identified by the source written in **upper case letters** in brackets. Full details of all these are found on the

SMILE Commercial References Sheet, available from SMILE Mathematics.

The Outside of the SMILE Network

Assessment Grids

To aid the recording of:

- NFER results
- termly assessment and attainment grades
- individual action targets
- SEN and IEP's

Using and applying mathematics criteria reflect the three stands for Key Stage 4.

Other Resources

SMILE resources which are:

- Teacher Resources
- Support materials for students
- Additional resources

Teacher resources from SMILE - in numerical order

The following SMILE materials come as part of either a Full Class Set or a Single Copy Set and are not recorded on the inside of the SMILE Network.

1701 Post Half Posters Good display poster to encourage project work on area and

fractions.

2112 Imaginings A collection of lesson starters and enders, based upon 3-D

visualisation.

2176 Talking PosterGood display poster to encourage mathematical discussion.

2292 Towers (box) A game for revision for Key Stages 3 & 4, based upon Trivial

Pursuit.

2324 Reckonings A collection of lesson starters and enders, based upon

mental mathematics

2376 Maths in Your Head A collection of lesson starters and enders, based upon

mental mathematics

Support materials for students from SMILE - in numerical order

The following SMILE materials come as part of either a Full Class Set or a Single Copy Set and are not recorded on the inside of the SMILE Network.

1783 Calculating Booklet Each activity in this booklet has been referenced on the

SMILE Network from SMILE 2113 to SMILE 2126.

2002 Real Spirals A good resource for project work on spirals.

2096 Fraction Playing Cards A resource for students, also needed for SMILE 2097 and

SMILE 2105.

2163 Geometry Facts

This is referenced on many SMILE activities where students

need to find definitions of shapes and angles.

2226 Number Playing Cards A resource for students which is referenced on many SMILE

activities where students require number cards.

2323 Statisical Inv. Help Book A resource for students.

2364 Decimal Playing Cards A resource for students, also needed for SMILE 2365, SMILE

2366, SMILE 2368 and SMILE 2369.

Additional resources available from SMILE Mathematics

The following SMILE materials do not come as part of the classroom materials, but are for use as whole class lessons, to aid group work and differentiation.

Bridging Units 2 units suitable for Year 7.

Nice Ideas in one place V. 1 & 2 Contains 25 and 20 activities respectively for KS 3 and 4.

Reasonings Contains 27 activities suitable for KS 3.

Revision through Groupwork 9 topics allowing for differentiation.

Whole Class Projects 8 projects, suitable for KS 3 and 4.

Additional resources from SMILE Mathematics for Assessment

The following pack does not come as part of the classroom materials.

Assessment Pack Provides starting activities and diagostic tests for Levels 2 to 6

Resource programs from SMILE Mathematics

The following programs do not come as part of the classroom materials.

1650 Take Part (DfEE) 1796 Plotter (GRAPH) 1903 Numbers (PROP/NO)

1702 Circle (INVEST) 1851 Regions (GRAPH) 2373 Queens (MOVE)

1776 Spirals (INVEST) 1853 Pinball (INVEST)

1828	Find the Shape	2171	Pie Chart Match	2339**	
1844	Straight Lines	2173	Unmarked Angles	2340**	
1847	Symmetrical Triangles	2174	The Mode	2341**	
1849	100 Search	2178a	(Volumes)	2342**	5 x Table
1856	What Shapes?	2186	Missing Pieces	2343**	
1862	Even Animal		(Population Pyramids)	2344**	
1868	Symmetry Match (A3)	2193	Number Square Words	2345**	
1902a	(Short Middle Long)	2199	Percentage Estimation	2346**	
1904	Find the Operation	2203	Algebra Match	2347**	
1907	About How Long?	2205a	(Making 25p)	2348**	
1911	Dissection Pairs	2206a	(Exploring Sine Curves)	2349**	12 x Table
1914	Adding Counters	2207a	(Pinball Experiments)	2357	Matching Algebraic Exps
1919	How many Centimetre Squares?	2211	Equivalent Expressions	2358	Angle Fit
1931a	(Which Scripts?)	2212	10 Search	2360 2362	Rotational & Line Symmetry Review Decimal Routes
1942	Growing Patterns	2213	Sum Message	2372	Powers of Ten Flags
1945	Square Diagonals	2216	From Matches to Mappings	2382	Areas of Polygons
	d (Making One)	2219a	(Origami Cube)	2384	Angles in a Regular Hexagon
1999a	(Equiangular worksheet)	2220a	(Trig for any Triangle)	2387	Multiples of Ten
2003a*	(Birthday Dates)	2222	Equal Areas?	2389	Percentage Puzzle
2019	Power Match	2223	Fraction to Decimal Match	2391	Matching Weights
2020	High Powered Matching	2224a	(Shajjad's Collection)	2398	Decimal Places Match
2022a	(Fewest Keys)	22 2 5a	(Wildlife Collection)	2400	Circle Cut
2023	Alphabet Symmetry	2230	Which has the Largest Area?	2401a	(Play Your Cards Right)
2031a	- (Spiralling Squares)	2233	(Cafe Menu)	2402	Equivalent Fractions Sort
2034a	(Likely or Unlikely)	2237	Words Won't Fail Me?		
2035	Symmetry Codes	2239	Putting in Order		
2037a	(3 in 1 Maze)	2240	Ask me Another		
2045	Hot and Cold	2242	Decimal Flags		
2054a	(4 Sides)	2247a	(More Than, Less Than)		
2056	Surrounding Right-angled Tri.	2251	Put them in their Place		t must decord the wholes
2058	Tie	2252	Something and a Half		produced worksheets
2079a	(Sketchy Activity)	2256	Matching Fractions		are available from Tarquin ations. See Commercial
2 082a	(Opp, Adj and Hypotenuse)	2258a	(Substititing into Formulae)		ence Sheet
2088	What's the Difference?	2259	Multiplication Flags	1001	(Fausi Angles)
2089.	Oxford Street	2261	Shape-Tiles	1331 1332	(Equal Angles) (Rotation)
2095	Squares, Cubes and Roots	2262	Find the Route	1333	(Directions)
2107	Oxfam Collection	2264	Plus and Minus Grids	1339	(Flags)
2110	Number Sort	2267a	(Introducing Ratio)	1340	(Pattern and Notation)
2111a-	c+ (Rot Symmetry Jigsaws)	2274	abc	1341	(Number Machines)
2129	Tens and Fives	2278	Mapping Jigsaw	1342	(Mappings and Graphs)
2131	Filing Cards	2279c-c	I (Island Game)	1343	(Simple Mappings)
2133	Out of 100	2292a	(Towers)	1344	(Further Mappings)
2134a	(Similar Rectangles)	2296	Mapping Rectangles	1866	(Reflection Activities)
2143	Percentages of Money	2305	Hexagon Puzzle	2073 2074	A1, A2, A3, A4 B2, B6, B10 Tricube
2147	Odd Animal	2306	Patterns on a Line	2074	C1, C5, C6, C8 Puzzles
2151a	(The Root of the Problem)	2308	Word Match	2076	D1, D5, D8, D10
2153	£1 Search	2310	Sequences Jigsaw	2077	E3, E7, E10
2154a	(Sum Dice Number Cards)	2321a	(The Algebra Game)	2286	A3, A4
2155a	(Visualising)	2330	Missing Angles	2287	A5, A6
	(
2157	Some Sums for your mind	2332	Decimals on a Number Line	2288	B1- B6 Algebra through
	,	2332 2333	Decimals on a Number Line Quiz Times	2289	C1- C6 Geometry
	Some Sums for your mind			2289 2290	C1- C6 Geometry D1 - D6
2158a-	Some Sums for your mind c Turning Green	2333	Quiz Times	2289	C1- C6 Geometry



Worksheet List

0001 - 2403 April 2001

The SMILE Worksheet pack contains one copy of the following worksheets for duplication in school. Those marked with:

- * should be duplicated onto card so that it can be used to make models, to play a game, to use as a template, etc.
- + should be duplicated onto coloured paper.
- **should be made up into an 8 page booklet.

Where the name of the activity is in brackets, this indicates that an additional card is needed.

0027	Number Squares	0475c	(All Change)	1376a	(Jobs in Order)
0028	Number Squares 2	0476	Mappings	1379	Fishing
0030	Number Squares 4	0493	Sam Shape	1390	Multiplication Table Facts
0031	Find the Number 1	0510	Radar	1417a*	(Tens Counters)
0033	Find the Number 3	0550	Adding Shifts	1419a+	(Versa-Tiles)
0034	Find the Number 4	0577	Reflect	1422a	(8/12/16 - point circles)
0057	Fractions 3	0579a	(Cut-outs for Two Loops)	1463	Use Brackets!
0058	Fractions 4	0592a	(Powerful Rules)	1525	Economical Weaving
0066a*	(Napiers Rods)	0614	Powers of Ten	1555	Mystic Rose
0069	Cardioid	0617	Looking Around	1557	Spirals
0074	Sum and Product	0696a	(Number Codex)	1565	Symmetry
0098	Plaited Cube	0697	Hidden Shapes	1570	Pounds and Pence
0099	Sum and Product Again	0705	Cross Puzzles	1592	Two Cuts Investigation
0114	Nines	0713	Jumping Jack	1627	Self Portrait
0121	100 Square Patterns	0725	Race Track	1628a*	(Eight Squares cut-out)
0168	Right Angled Triangles	0730	Rotations	1629	Pentagons
0178	Rectangles	0735	Knots	1635	The Key to Success
0184	Number Puzzle	0738a	(Family of Quadrilaterals)	1636	Calculator Flags
0242	Cracking the Code	0777	Satellite Signals	1643a*	Cards (Lucky Dip)
0251	Mirror Symmetry	0808a	(Code Breaking)	1643b	Score Sheet (Lucky Dip)
0259	Shading Fractions	0824h	Pentagram (Golden Rectangle)	1647	Weaving
0264	Cartoon Co-ordinates	0824j	Rectangle (Golden Rectangle)	1668a	(Mapping Puzzle)
0272	A Vehicle Survey	0839	Rotate This Way	1669	Sim
0288	Rolling Two Dice	0845a	(Negative Scale Factor)	1679d-1	(Spheres)
0292	Doubling Patterns	0849	Anywhere on the Number Line	1703	Find the Uncle
0316	Counting On/Back	0852a	(Colouring Triangles)	1711	Missing Digits
0327	Centres of Rotation	0853a	(Grids)	1712	Four Signs
0330a	(Multiple Patterns)	0868	Evens	1717	Add-a-square
0341	Nodes	0869	Puzzle Worksheet	1733	An Even Code
0346	Sequences in Squares	0881	24 Squares	1734	An Islamic Design
0352	Table Squares	0894b	(Force Meet Pack)	1749a	(Decimal Jigsaw)
0354	Tom the Bowling Champ	0895	Jumps	1753	Matching Pairs
0359	How Many Colours?	0905a	(Domino Puzzle)	1758	Co-ordinate Messages
0367	Fraction Wall	1095	Percentages	1759	Shapes That Can Grow
0383	Building Shapes	1096	Marks to Percentages	1760	One Straight Cut
0384	Changing Grids	1278a	(Multiplying Directed Numbers)	1761	Gelosia Problems
0390	Surfaces	1299	Tangram Arrows	1768	Zigzag
0396	Hexagons	1309	More Vector Messages	1792a	(Feeling Hungry)
0397a*	(Operations)	1317**	Mult & Div by 10, 100, 1000	1795	Identical Halves
0404	Solids	1321	Prism or Pyramid?	1799	Boxes
0424	How Many Routes?	1355	Halves and Quarters	1812	Find Four Squares
0448	Favourite Colours	1358	Joining Multiples	1813	Crossword
0456	Midpoint Sequences	1359	Joining Odds and Evens	1818a	(Helicopter Photographs)
0470	Nephroid	1360	Pictures from Multiples	1824	Silver Earrings



EQUIPMENT LIST

SMILE 0001 - 2403 April 2001

The following are likely to be needed for many of the SMILE activities.

angle indicators box of coins

box of shapes (labelled with

names)

box of solids

calculators (4 function, scientific

and graphic) centicubes compasses computer counters dice

DIME solids

dominoes drawing pins elastic bands

glue

logiblocks (Attribute blocks)

maps - (LT map etc.)

matches
match boxes
metre rule
mirrors
multilink cubes

multilink cube pack of cards paper clips pegs
pegboards
pentominoes
pinboards
protractors
rotograms

rulers (mm and cm)

scissors sellotape set square Tak-Tiles (DIME) tape measure

The following are needed specifically for only one or two SMILE activities.

ball

base 10 apparatus cocktail sticks

Highway Code Karnaugh map (4 x 4 grid to accommodate logiblocks) 2 loop and 3 loop boards marbles

Napier's Rods (optional)

newspapers

probability maze shopping catalogue Soma Cube stop clock thermometer Tricubes (DIME)

weights

The following types of paper will be required.

1cm square paper 1cm square dotty paper 2cm square paper

1cm isometric paper

1cm isometric dotty paper

2cm isometric paper 100 squares

multiplication squares

plain paper tracing paper gummed paper

card

graph paper (1mm and 2mm) paper circles (filter papers)

gummed strips

Materials to support the use of technology in the mathematics classroom.

LOGO, a spreadsheet and a geometry drawing package.

Spreadsheets from SMILE Teachers' book

Teachers' book (SMILE)

Hints and Answers Book (SMILE)

For a list of commercially published materials which are referred to on the 2001 SMILE Network, please see the Commercial Reference Sources sheet obtainable from SMILE Mathematics.

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