Year 3

Using and applying mathematics

- **Solve one- and two-step problems involving numbers, money or measures, including time, choosing and carrying out appropriate calculations**

The table shows the times when some children start their swimming lessons.

name	time
Desi	9.15 am
Ella	9.45 am
Harry	8.45 am
Sita	7.15 am
Tom	8.15 am
Vicky	7.45 am

Which 2 children have lessons between Harry and Sita?

KS1 2003 level 3

Lewis makes a call from a telephone box.
He has £2 in coins.
He uses these five coins to make the call.

How much money has he got left from the £2?

KS2 2001 Paper A level 3

Megan is 109cm tall.
Sunil is 137cm tall.
How much taller is Sunil than Megan?

KS1 2002 level 3

Sita had £10. She spent £2.35.
How much money did she have left?

KS1 2003 level 3

Kemi is looking at a number on a card.
She doubles the number then adds 3.
Her answer is 15.
What number is she looking at?

KS1 2007 level 3

Jane chose a number. She doubled it.
Her answer was one hundred and two.
What number did Jane choose?

KS1 2005 level 3 [oral]

Kemi has only two coins in her purse. Tick (✓) all the amounts she could have in her purse.

23p.....20p.....25p.....22p.....26p

KS1 2007 level 3

There are 265 children at Hill School.
102 children have a packed lunch.
27 children go home for lunch.
The other children have a school lunch.

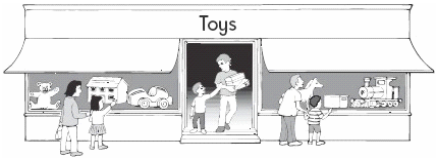
How many children have a school lunch?
Show how you work it out.

KS1 2005 level 3

Harry does English and maths homework each week. It takes him a total of two and a half hours.

He spends 80 minutes doing English homework.
How many minutes does he spend doing maths homework?

KS1 2004 level 3



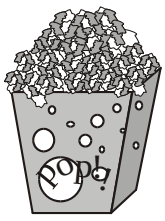
The shop is open for 6 days each week.
It is open for 8 hours each day.
How many hours is the shop open each week?
Show how you work it out.

KS1 2005 level 3

Chen has £9.10.
He wants to buy a game which costs £11.50.
How much more does he need to save?

Y4 optional test 2003 Paper A level 3

Cinema tickets cost £3.65 each.
Hannah buys 4 tickets.
How much does Hannah pay?



popcorn
£1.95

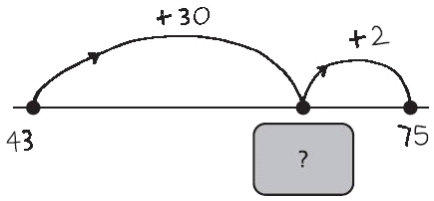
milkshake
£1.25

Nico buys a box of popcorn and two milkshakes.
How much does Nico spend altogether?

KS2 2004 Paper B level 3

- **Represent the information in a puzzle or problem using numbers, images or diagrams; use these to find a solution and present it in context, where appropriate using £.p notation or units of measure**

Molly drew a number line to find the answer to 43 + 32.



What number is hidden under the card?

Y4 optional test 2003 Paper A level 2

Kiz worked out the answer to 7 × 3 on a number line. Show how Kiz could have worked out the answer on this number line.

KS1 2005 level 3

The table shows how many 10p, 5p and 2p coins Tara has.

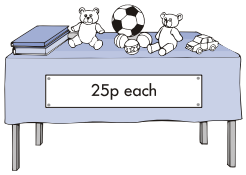
Coin	Number of coins
10p	8
5p	4
2p	5

How much money does she have altogether?
Work it out in the box.

£

KS1 2009 level 3

Each toy costs 25p. Jack buys 6 toys.



How much change does he get from £2.00?
Show how you work it out in the box.

KS1 2007 level 3

Sunil had 50 books.
He sold some and then had 20 left.
Which of these is a number sentence that shows this?

A □ – 20 = 50
B 20 – □ = 50
C □ – 50 = 20
D 50 – □ = 20

Here are some signs.

+ − × ÷

Write the correct sign in each box.
One is done for you.

3 + 3 = 6
3 □ 3 = 1
3 □ 3 = 9

KS1 2009 level 3

Tara does not know how to work out the answer to this:

16 × 5 =

Show Tara how to work out the correct answer in the box.

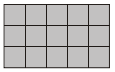
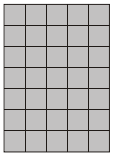
KS1 2009 level 3

Jack worked out the correct answer to 50 × 4 × 2.
His answer was 400.
Show how he could have worked out his answer.

400

KS1 2007 level 3

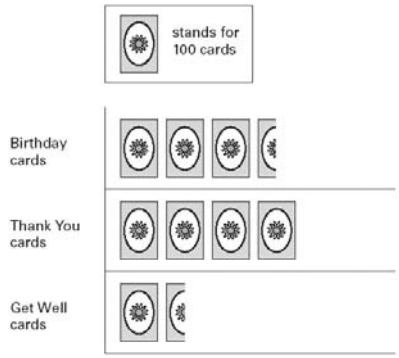
Complete the table. The first row is done for you.

	1 × 5	5
	3 × 5	
		35

KS1 2007 level 3

- **Follow a line of enquiry by deciding what information is important; make and use lists, tables and graphs to organise and interpret the information**

A shop sells different kinds of greeting cards. This pictogram shows how many they sold in a week.



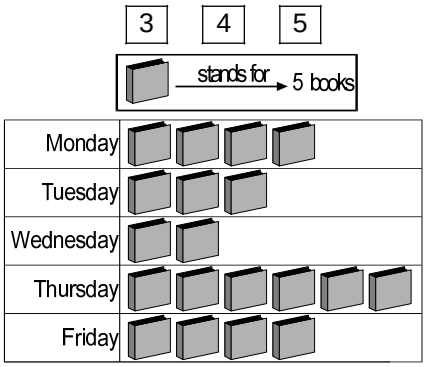
Estimate how many Birthday cards were sold.

Estimate how many more Thank You cards than Get Well cards were sold.

KS2 2005 Paper B level 3

Look at this pictogram.

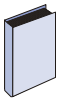
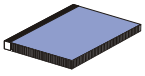
Number of books borrowed from the library



How many more books were borrowed on Tuesday than on Wednesday?

KS1 2000 level 3

Some children counted the number of books and CDs at home.

	Books 	CDs 
Jim	72	52
Ryan	21	49
Lucy	62	32
Dan	48	48
Sara	28	56

Two children have fewer CDs than books. Which children?

Who has twice as many CDs as books?

KS1 2007 level 3

This table shows how many journeys a taxi driver made on five days and how much money he collected.

	number of journeys	money collected
Monday	23	£85
Tuesday	36	£112
Wednesday	18	£69
Thursday	31	£124
Friday	35	£109

How much money did he collect on the day that he made the most journeys?

How much more money did he collect on Monday than on Wednesday?

KS2 2003 Paper A level 3

Write each letter in the correct place on the diagram. One has been done for you.

T N P S

	curved lines	**no** curved lines
straight lines		
no straight lines	S	

Y4 optional test 2003 Paper A level 3

---

60 children visit the zoo. They each vote for their favourite big cat. Complete the table.

favourite big cat	number of children
cheetah	7
lion	22
tiger	13
panther	
leopard	10
total	**60**

Now look at each sentence below. Put a tick (✓) if it is true. Put a cross (×) if it is not true.

☐ Nine more children voted for the lion than for the leopard.

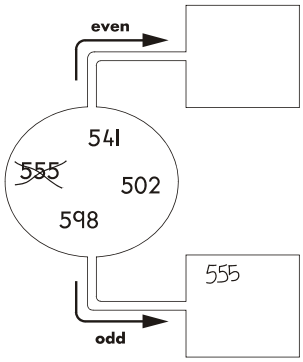
☐ The lion was more popular than the tiger.

☐ $\frac{1}{4}$ of the children voted for the tiger.

Y3 Optional test 2003 paper A level 3

- **Identify patterns and relationships involving numbers or shapes, and use these to solve problems**

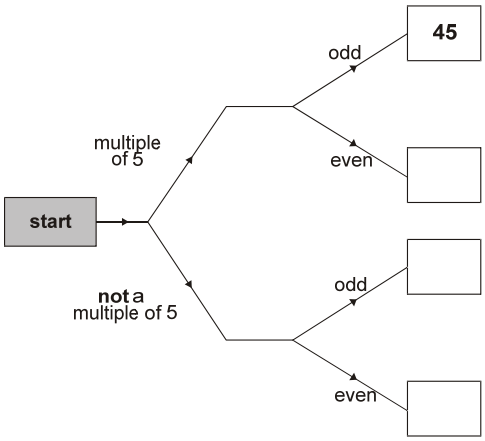
Write the numbers in the correct places on the diagram. One is done for you.



KS1 2007 level 3

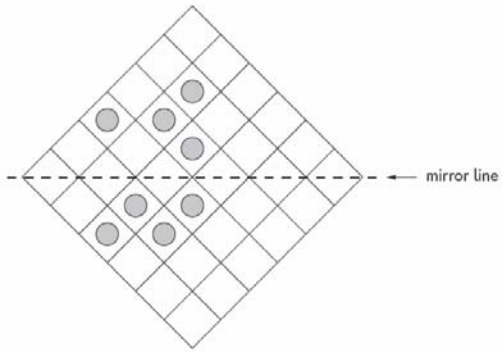
Here is a diagram for sorting numbers.
Write each number in the correct box.
One is done for you.

~~45~~ 46 20 53



KS1 2009 level 3

Draw the 2 missing circles to make this pattern symmetrical.



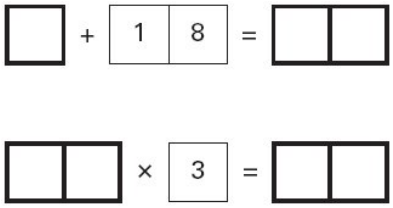
KS1 2005 level 3

Write the same number in each box to make this sum correct.

□ + □ + □ = 42

KS1 2009 level 3

Each missing digit in these calculations is 2, 5 or 7.
Write in the missing digits.
You may use each digit more than once.



KS2 2005 Paper B level 3

Hayley makes a sequence of numbers. Her rule is:
'find half the last number then add 10'.
Write in the next two numbers in her sequence.

36 28 24 □ □

KS2 2003 Paper B level 3

Use each number card once to make the answer to each calculation an even number.

3 4 5

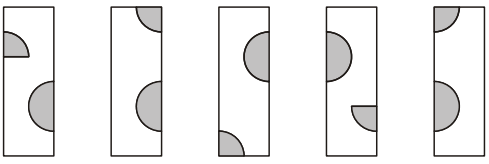
5 × □
12 ÷ □
9 + □

KS2 2004 Paper A level 3

Here is a tile.

The tile is turned.

One of the diagrams below shows the tile after it has been turned. Tick (✓) the correct diagram.



KS2 2007 Paper A level 3

- **Describe and explain methods, choices and solutions to puzzles and problems, orally and in writing, using pictures and diagrams**

A carton of orange fills 6 cups.
Mrs Green wants to fill 50 cups with orange.
How many cartons of orange does she need to buy?
Show how you work it out.

KS1 2003 level 3

Harry saves 20p coins. He has saved £3.20.
How many coins has he saved?
Show how you work it out.

KS1 2004 level 3

Here are some signs.

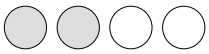
× = ÷

Write a sign in each box to make this correct.

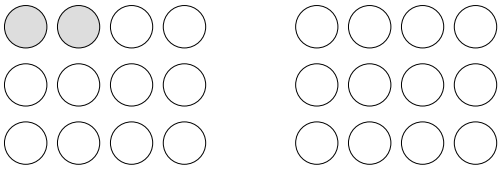
20 □ 4 □ 5

KS1 2003 level 3

.Kemi has two grey and two white counters.

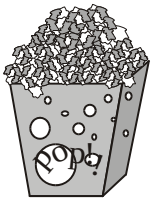


Show all the different ways she can put them in a line. One is done for you.



KS1 2007 level 3

Cinema tickets cost £3.65 each.
Hannah buys 4 tickets.
How much does Hannah pay?



popcorn
£1.95

milkshake
£1.25

Nico buys a box of popcorn and two milkshakes.
How much does Nico spend altogether?
Show your method.

KS2 2004 Paper B level 3

John says, 'Every multiple of 5 ends in 5.'

Is he correct? Circle Yes or No.
Explain how you know.

KS2 2004 Paper B level 3

A square always has four sides.

Is it true that a four-sided shape is always a square?
Circle Yes or No.
Explain how you know.

KS2 2008 Paper A level 3

Counting and understanding number

- **Read, write and order whole numbers to at least 1000 and position them on a number line; count on from and back to zero in single-digit steps or multiples of 10**

Write these numbers in order of size, starting with the smallest.

901 1091 910 109 190

smallest

KS2 2006 Paper A level 3

Write these numbers in the circles.
All the numbers must be in order.

310 93 281

13 280 287 492

smallest largest

KS1 2004 level 3

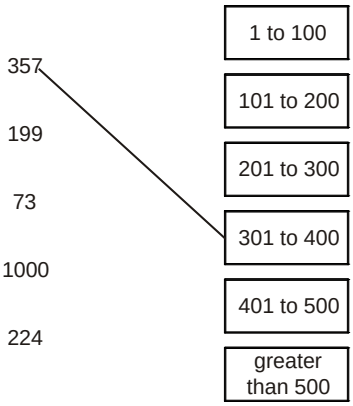
Write these numbers in order.

164 146 106 160 140

smallest largest

Y3Optional test 2003 Paper A level 3

Join each number to the set of numbers that it belongs to. One has been done for you.



KS2 2008 Paper B level 3

Here are the first five numbers in a sequence.

1st	2nd	3rd	4th	5th
420	400	380	360	340

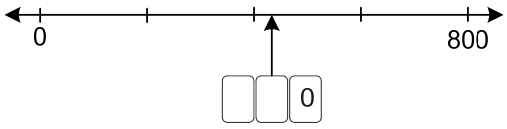
The sequence continues in the same way.
Write the number that will be 10th in the sequence.

KS1 2009 level 3

Here are four digit cards.

2 9 4 7

Use two of the four cards to make the number on the number line.



Y5 optional test 2003 Paper A level 3

3 8 9 1

Choose three of these number cards to make an even number that is greater than 400.

KS2 2002 Paper A level 3

Katie has these digit cards. She makes different 2-digit numbers with them.

5 7 2

Write all the 2-digit numbers Katie can make with them.

Y3 optional test 2003 Paper A level 3

What number is ten less than three hundred and two?

Y3 optional test 2003 Mental test level 3

Write the missing number.

994 —**10 more**→ ☐

KS1 2004 level 3

Write the number one thousand and six.

KS1 2003 level 3 [oral]

Write in figures the number one thousand and twenty.

KS2 2003 Mental test level 3

• Partition three-digit numbers into multiples of one hundred, ten and one in different ways

Write the total.

200 + 40 + 7 =

KS1 2004 level 3

Write a number in the box to make this correct.

857 = ☐ + 50 + 7

KS1 2000 level 2a

Write the missing numbers.

361 = ☐ + 60 + 1

945 = 900 + ☐ + 5

KS1 2007 level 3

Write numbers in the boxes to make this correct.

350 + ☐ + ☐ = 420

KS1 2004 level 3

3 8 9 1

Choose three of these number cards to make an even number that is greater than 400.

☐☐☐

KS2 2002 Paper A level 3

Look at these digit cards.

8 9 7

Use each card once to make the largest number.

☐☐☐

Use each card once to make the smallest even number.

☐☐☐

KS1 2003 level 3

• Round two- or three-digit numbers to the nearest 10 or 100 and give estimates for their sums and differences

Circle the number that is closest to 700.

750 72 651 69 770

KS2 2004 Paper B level 3

Round the following numbers.

540 to the nearest 100 ☐

236 to the nearest 10 ☐

KS2 2009 Paper B level 3

Circle the number that is closest to 250

261 246 255 209 275

KS2 2007 Paper B level 3

Here are some numbers.

307.....249.....355.....297.....311

Write one of the numbers in the box to make this correct.

The number ☐ rounded to the nearest 10 is 300.

KS1 2007 level 3

Which of these numbers give 80 when rounded to the nearest 10? Circle all the correct numbers.

84 87 72 76 90

KS2 2003 Paper A level 3

Write the missing number.

256 → to the nearest **100** → ☐

KS1 2003 level 3

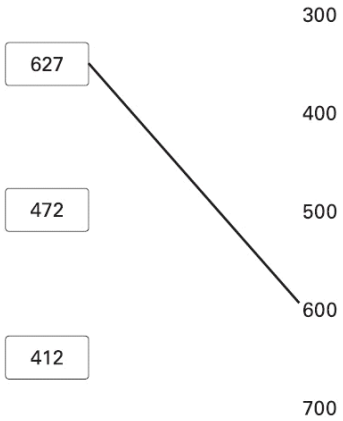
Round four hundred and sixty-two to the nearest ten.

KS1 2009 level 3 [oral]

Write three hundred and twenty-six to the nearest ten.

KS2 2000 Mental test level 3

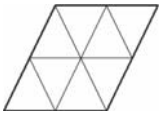
Round each number in a box to the nearest 100. One is done for you.



Y3 optional test 2003 Paper B level 3

- **Read and write proper fractions, e.g. $^{3}/_{7}$, $^{9}/_{10}$, interpreting the denominator as the parts of a whole and the numerator as the number of parts; identify and estimate fractions of shapes; use diagrams to compare fractions and establish equivalents**

Colour $^{1}/_{2}$ of this shape.

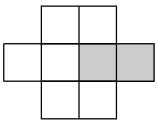


KS1 2005 level 3

Shade $^{1}/_{4}$ of this shape.

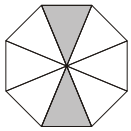
Year 3 optional test 2003 Paper A level 3

Shade more squares so that $^{3}/_{4}$ of the shape is shaded.



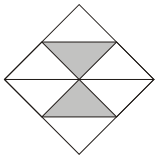
KS1 2003 level 3

This shape is divided into equal parts.
What fraction of this shape is shaded?



KS1 2009 level 3

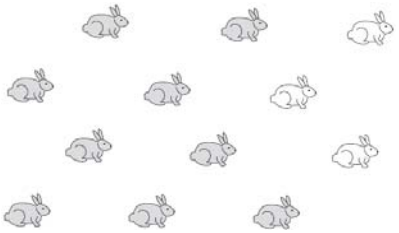
Here is a square.



What fraction of the square is shaded?

KS2 2004 Paper A level 3

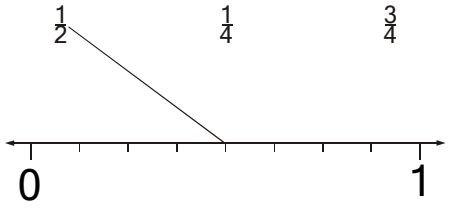
What fraction of these rabbits is grey?



Write the fraction.

KS1 2005 level 3

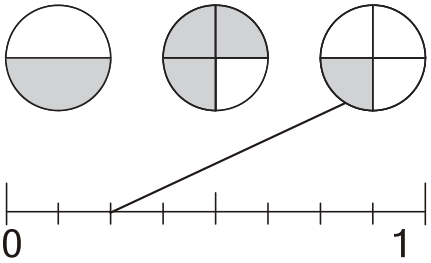
Look at the number line
Join each fraction to the correct place.
One is done for you



KS1 2007 level 3

A fraction of each shape is shaded. Match each fraction to the correct place on the number line.

One has been done for you.



KS2 2009 Paper A level 3

Put a ring around the fraction which is equal to one-half.

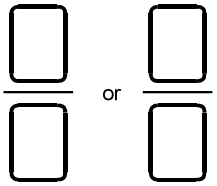
$\frac{1}{20}$ $\frac{1}{100}$ $\frac{2}{3}$ $\frac{3}{4}$ $\frac{5}{10}$

KS2 2004 Mental test level 3

Karen makes a fraction using two number cards.

She says, 'My fraction is equivalent to one half.
One of the number cards is 6.'

What could Karen's fraction be?
Give both possible answers.



KS2 2003 Paper B level 3

Knowing and using number facts

- **Derive and recall all addition and subtraction facts for each number to 20, sums and differences of multiples of 10 and number pairs that total 100**

What is nine minus four?

Y3 optional test 2003 Mental test level 2

Subtract nine from fourteen.

Y4 optional test 2003 Mental test level 2

What is eleven subtract six?

Y4 optional test 2003 Mental test level 2

Add together three, five and seven.

Y4 optional test 2003 Mental test level 2

What is the sum of six, eight and nine?

Y3 optional test 2003 Mental test level 3

Some children were asked to choose their favourite animal in the zoo. This table shows the results.

	Girls	Boys
zebra	9	3
lion	4	9
giraffe	7	4
monkey	8	7
elephant	6	5

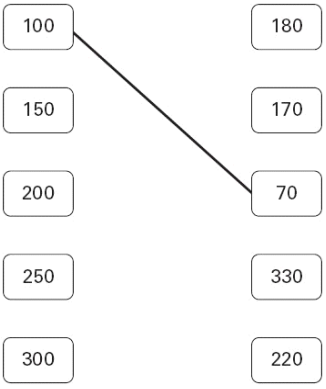
How many more girls than boys chose giraffes?

How many more boys chose lions than elephants?

Which animal was chosen by the greatest number of children?

KS2 2007 Paper B level 3

Draw lines to join all the pairs of number cards which have a difference of 30.
One has been done for you.



KS2 2005 Paper A level 3

What must be added to eighty-three to make one hundred?

Y3 optional test 2003 Mental test level 3

What number must I add to thirty-six to make one hundred?

Y4 optional test 2003 Mental test level 3

What is one hundred subtract twenty-four?

KS2 2001 Mental test level 3

Subtract twenty-one from one hundred.

KS2 2005 Mental test level 3

Katie has one pound. She spends twenty-five pence. How much money does she have left?

Y3 optional test 2003 Mental test level 2

Tom bought one stamp for twenty pence. How much change should he get from one pound?

Y4 optional test 2003 Mental test level 2

Write the missing number in the box.

□ + 57 = 100

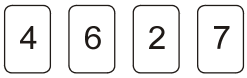
KS1 2002 level 3

Write numbers in the boxes to make to make this correct.

60 + □ = 100 = 20 + □

KS1 2007 level 3

Here are four digit cards.



Use all four digit cards to make this sum correct.

KS2 2009 Paper A level 3

What is the total of one hundred and twenty and seventy?

Y4 optional test 2003 Mental test level 3

Circle three numbers which add to make 190

10 30 50 70 90

KS2 2001 Paper B level 3

- **Derive and recall multiplication facts for the 2, 3, 4, 5, 6 and 10 times-tables and the corresponding division facts; recognise multiples of 2, 5 or 10 up to 1000**

What is six multiplied by five?

KS1 2007 level 3 [oral]

Multiply five by nine.

KS2 2001 Mental test level 3

Five is a quarter of a number. What is the number?

KS1 2003 level 3 [oral]

Multiply eight by four.

Y4 optional test 2003 Mental test level 3

What is three times three added to four times four?

KS2 2003 Mental test level 3

There are 35 children.
They get into teams of 5.
How many teams are there altogether?

KS1 2003 level 3

Write the missing number in the box.

☐ ÷ 2 = 7

KS1 2001 level 3

Write the answer.

45 ÷ 5 = ☐

KS1 2002 level 3

Rob has some number cards.

He holds up a card. He says, 'If I multiply the number on this card by 5, the answer is 35.'
What is the number on the card?

He holds up a different card. He says, 'If I divide the number on this card by 6, the answer is 4.'
What is the number on the card?

KS2 1999 Paper A level 3

Jack thinks of a number. It is a multiple of ten.
It is more than one hundred and fifty and less than two hundred.
What could the number be?

KS1 2007 level 3 [oral]

Circle three numbers that add to make a multiple of 10.

11 12 13 14 15 16 17 18 19

KS2 2005 Paper A level 3

Write | always | | sometimes | or | never | in each box to make the sentences correct.

Multiples of 2 ☐ end in 3

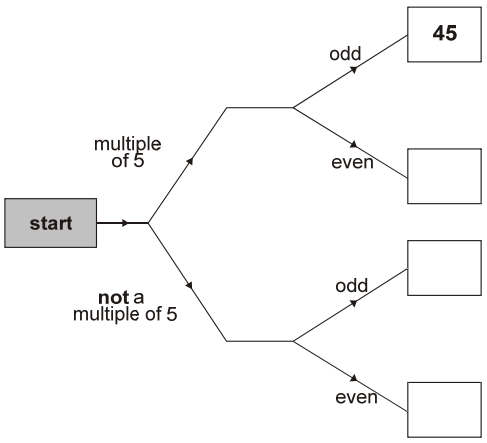
Multiples of 5 ☐ end in 5

Multiples of 10 ☐ end in 0

KS1 2009 level 3

Here is a diagram for sorting numbers.
Write each number in the correct box.
One is done for you.

~~45~~ 46 20 53



KS1 2009 level 3

- **Use knowledge of number operations and corresponding inverses, including doubling and halving, to estimate and check calculations**

Write in the missing numbers.

☐ + 85 = 200

4 × ☐ = 36

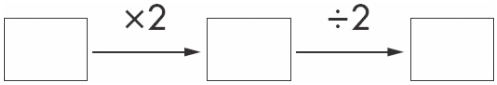
120 – 51 = ☐

KS2 2004 Paper A level 3

Write a calculation that you could do to check the answer to

150 + 350 = 500

Write a number in each box to make this correct.



KS1 2005 level 3

Estimate the answer to

48 + 71

11 × 49

Calculating

- **Add or subtract mentally combinations of one- and two-digit numbers**

What is twenty-seven subtract nine?

Y3 optional test 2003 Mental test level 3

Add thirty-six and seventy.

KS2 2002 Mental test level 3

Subtract thirty-two from seventy.

KS2 2004 Mental test level 3

What is the sum of twenty-three and twenty-seven?

KS2 2000 Mental test level 3

Add ten and ninety-seven.

KS1 2009 level 3 [oral]

What is thirty subtract nineteen?

KS1 2007 level 2 [oral]

Start with the number eighteen.
Double it and then add ten.

KS1 2009 level 3 [oral]

Emma is 21 years old today.
Her father is 24 years older.
How old is Emma's father?

KS1 2005 level 3 [oral]

There are 52 children on the bus.
19 get off.
How many children are left on the bus?

KS1 2004 level 3 [oral]

Mina and Ben play a game.

Mina scores 70 points.
Ben scores 42 points.
How many more points does Mina score than Ben?

Y3 Optional test 2003 Paper A level 3

This table shows the increase in bus fares.

Bus fares	
old fare	new fare
42p	48p
52p	57p
60p	72p
75p	85p
90p	£1.05
£1.20	£1.28

Sohan's new bus fare is 72p.
How much has his bus fare gone up?

Millie says, 'My bus fare has gone up by 10p'. How much is Millie's new bus fare?

KS2 2001 Paper A level 3

Circle the numbers that add up to 100

64 32 16 8 4 2 1

KS2 2005 Paper A level 3

- **Develop and use written methods to record, support or explain addition and subtraction of two- and three-digit numbers**

Write the total.

156 + 83 =

KS1 2004 level 3

Write the total.

256 + 172 =

KS1 2001 level 3

Write the total.

175 + 65 =

KS1 2007 level 3

Add together 24, 67 and 45.

KS1 2001 level 2a

Write the missing number in the box.

456 + ☐ = 710

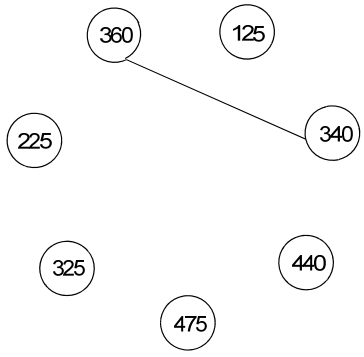
KS1 2003 level 3

Write the total.

36 + 44 + 24 =

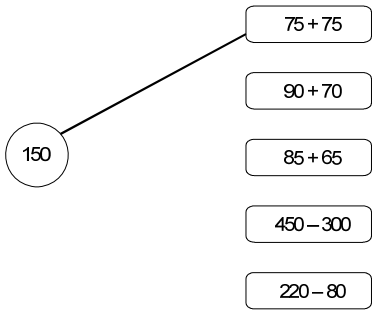
KS1 2009 level 3

Draw a line to join two other numbers which have a total of 700.



KS2 2000 Paper B level 3

Draw lines to join the circle to two more number cards which make 150.



KS3 2002 Paper A level 3

Work out the difference between 147 and 205.

KS1 2005 level 3

Write the answer.

348 – 99 =

KS1 2009 level 3

Write the answer.

248 – 35 =

KS1 2009 level 3

Write the answer.

176 – 49 =

KS1 2003 level 3

Write the answer.

253 – 138 =

KS1 2007 level 3

Calculate 309 –198.

KS2 2003 Paper A level 3

Write the answer.

1000 – 143 =

KS1 2004 level 3

Write in the missing number.

☐ + 85 = 200

120 – 51 = ☐

KS2 2004 Paper A level 3

There are 1000 pieces in a puzzle.
12 pieces go missing.
How many pieces are left?

KS1 2009 level 3

• Multiply one- and two-digit numbers by 10 or 100, and describe the effect

Write the answer.

37 × 10 =

Y4 Optional test Paper A level 3

Put a ring around the number which cannot be divided exactly by 10.

60 110 80 120 90 101

KS1 1999 level 2a

Write the missing number in the box.

□ × 10 = 50

KS1 2001 level 2b

What is sixty-five multiplied by one hundred?

Y4 optional test 2003 Mental test level 3

Write what the missing numbers could be.

□ × □ = 150

Y4 optional test 2003 Paper A level 3

Harry multiplied two numbers together.
His answer was 120.
Which two numbers could he have multiplied together?

KS1 2004 level 3

Ben saved twenty-four 10p coins and ten 20p coins.
How much money has Ben saved?

Y3 optional test 2003 Paper A level 3

- **Use practical and informal written methods to multiply and divide two-digit numbers (e.g. 13 × 3, 50 ÷ 4); round remainders up or down, depending on the context**

Write the answer.

24 × 4 =

KS1 2005 level 3

Look at these three numbers.

5 12 60

Use all three numbers to make these correct.

□ × □ = □

□ ÷ □ = □

KS1 2009 level 3

Ella's dad washes some cars.
He uses 12 buckets of water.
Each bucket has 5 litres of water.
How many litres of water does he use altogether?

KS1 2004 level 2a

Miss West needs 28 paper cups.
She has to buy them in packs of 6

How many packs does she have to buy?

KS1 2009 level 3

Jack is making cards.
One sheet of paper makes 15 cards.
Jack uses 5 sheets of paper.
How many cards does he make?

KS1 2007 level 3

Ten children can sit at one table.
There are 43 children.
How many tables are needed so that each child can sit at a table?

KS1 2005 level 3

A carton of orange fills 6 cups.
Mrs Green wants to fill 50 cups with orange.
How many cartons of orange does she need to buy?

KS1 2003 level 3

Sadi needs 26 cartons of juice for her party.
There are four cartons in a pack.
How many packs does she need to buy?

KS1 2001 level 3

Write numbers in the boxes to make this correct.

30 ÷ □ = □

KS1 2007 level 3

Calculate 13 × 3.

Y3 optional test 2003 Paper A level 3

Calculate 48 ÷ 3.

KS2 2009 Paper A level 3

Calculate 56 ÷ 4.

KS2 2005 Paper A level 3

What is the remainder when twenty-seven is divided by five?

KS2 2005 Mental test level 3

Circle the two divisions which have an answer of 5 remainder 2

17 ÷ 5 17 ÷ 3 22 ÷ 4 22 ÷ 5

Y5 optional test 2003 Paper A level 3

Tara has 4 books.
Ravi has 3 times as many books as Tara.

How many books do Tara and Ravi have altogether?

KS1 2009 level 3

Alan has 45 beans.
He plants 3 beans in each of his pots.
How many pots does he need?

KS2 2004 Paper A level 3

Jack wants to buy a bike that costs £107.

He saves £10 each Saturday.

How many Saturdays will it take him to save enough to buy the bike?

KS1 2007 level 3

- **Understand that division is the inverse of multiplication and vice versa; use this to derive and record related multiplication and division number sentences**

Here are 3 numbers.

5 30 6

Use all the numbers each time to complete these.

5 × 6 = 30

6 × □ = 30

□ ÷ □ = 6

□ ÷ 6 = 5

KS1 2000 level 3

When I doubled a number, the answer was 18.
Which number did I double?

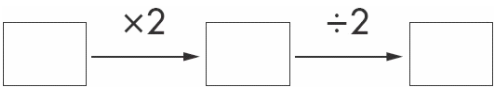
KS1 2001 level 2b

Write a number in each box to make this correct.

300 ÷ 2 = □ × □

KS1 2003 level 3

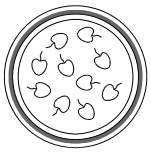
Write a number in each box to make this correct.



KS1 2005 level 3

- **Find unit fractions of numbers and quantities, e.g. ½, ⅓, ¼ and $\frac{1}{6}$ of 12 litres**

Jack ate half the cherries on the plate. These are the cherries that were left.



How many cherries were on Jack's plate before he ate half of them?

Y4 optional test 2003 Paper A level 3

Lucy has 16 cards.
She gives a quarter of her cards to Kiran.
How many cards does Lucy give to Kiran?

KS2 2003 Paper A level 3

Write the number which is half of 38.

KS1 2001 level 3

Here are 21 apples. Put a ring around one third of them.

Y4 optional test 2003 Paper B level 3

What is one-fifth of twenty-five?

Y4 optional test 2003 Mental test level 3

Five is a quarter of a number.
What is the number?

KS1 2003 level 3

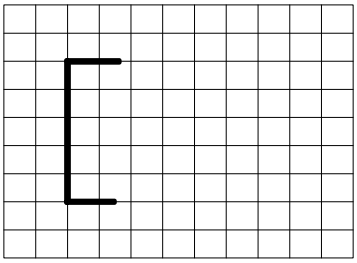
What number is half of 550?

KS1 2007 level 3

Understanding shape

- **Relate 2-D shapes and 3-D solids to drawings of them; describe, visualise, classify, draw and make the shapes**

Complete this shape so that it makes a square.



KS1 2000 level 2b

Write the missing numbers in the 2 empty boxes.

	number of square faces	number of triangular faces	number of circular faces
cylinder	0	0	
cube		0	0
pyramid	1	4	0

KS1 2000 level 2a

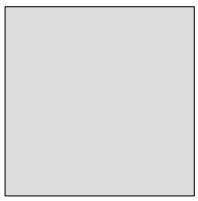
Imagine a cube.
Four faces are yellow, the rest are blue.
How many faces are blue?

KS1 2003 level 3 [oral]

How many vertices has a cuboid?

Y4 optional test 2003 Mental test level 3

Sita had a square.



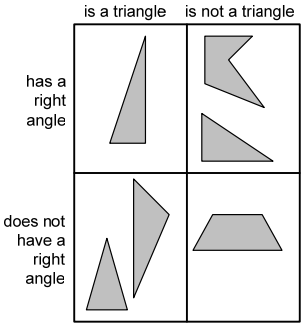
She cut a triangle of this size off each corner.

What is the name of the shape that is left?
Tick (✓) it.

square, pentagon, hexagon, heptagon, octagon

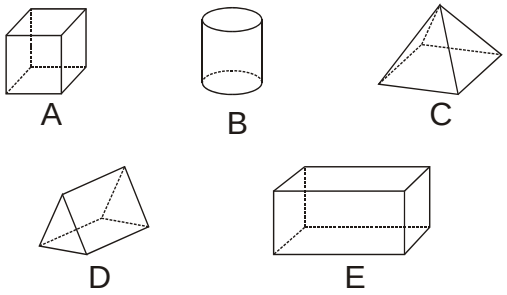
KS1 2003 level 3

One shape is in the wrong place on this sorting diagram. Draw a cross (×) on it.



KS1 2003 level 3

Look at the diagrams showing 3-D shapes.



One of the shapes has one square face and four triangular faces. Write the letter of this shape.

Two of the shapes have six faces.
Write the letters of these shapes.

KS2 2005 Paper A level 3

This table shows information about four solid shapes. Complete the table.
One has been done for you.

	number of **flat** surfaces	number of **curved** surfaces
sphere	0	1
cone		
cuboid		
cylinder		

KS2 2005 Paper B level 3

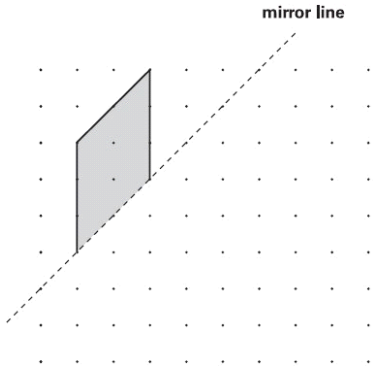
Here are seven shapes.

Write the letters of the two shapes which are pentagons.

KS2 2004 Paper B level 3

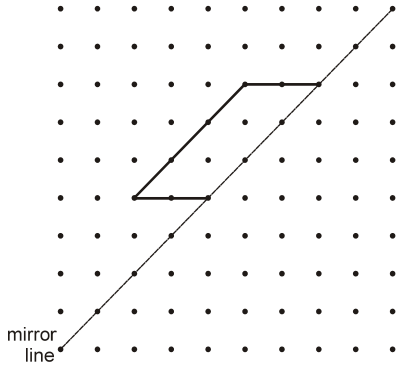
- **Draw and complete shapes with reflective symmetry; draw the reflection of a shape in a mirror line along one side**

Draw the reflection of the shape in the mirror line. Use a ruler.



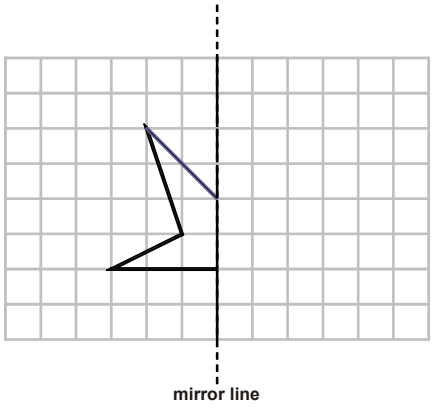
Y5 optional test 2003 Paper A level 3

Draw the reflection of this shape in the mirror line. You may use a mirror.



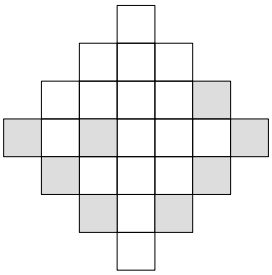
KS1 2009 level 3

Complete the diagram below to make a shape that is symmetrical about the mirror line. Use a ruler.



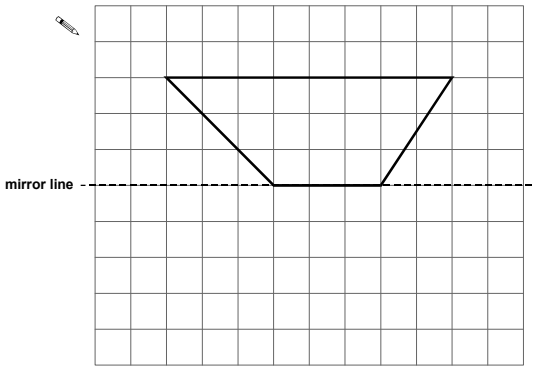
KS2 2004 Paper B level 3

Here is a grid with eight squares shaded in. Shade in two more squares to make a symmetrical pattern.



KS2 2003 level 3

Complete the diagram below to make a shape that is symmetrical about the mirror line. Use a ruler.



KS2 2003 Paper A level 3

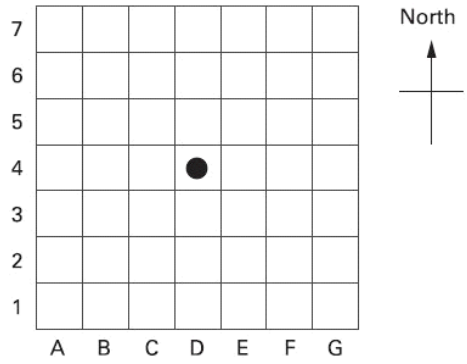
These two shapes are made from equilateral triangles.

Draw one line of symmetry on each shape. Use a ruler.

KS2 2006 Paper A level 3

- **Read and record the vocabulary of position, direction and movement, using the four compass directions to describe movement about a grid**

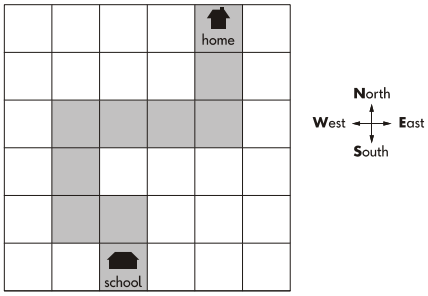
Lisa places a counter on square D4.



She moves it 2 squares east and 3 squares south.
Write the position of the square she moves it to.

Y4 optional test 2003 Paper B level 3

Look at the map.



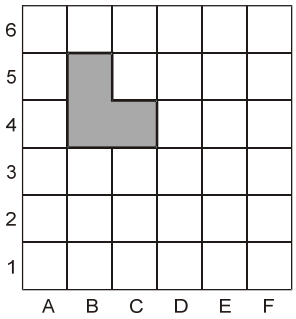
Jack walks along the path from home to school.

Complete the route that Jack walks

home
S2
W3
school

KS1 2007 level 3

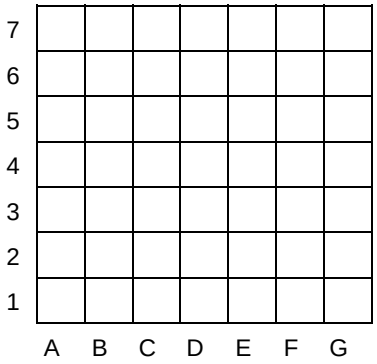
.Look at the L shape on the grid.



Part of it is in square B5.
Write the other two squares it is in.

KS1 2009 level 3

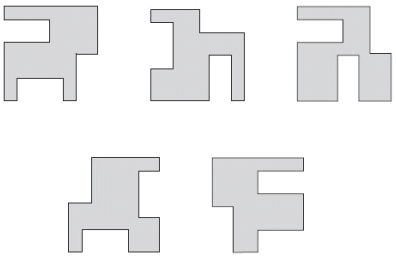
Tick (✓) the square which is exactly halfway between squares A1 and G7.



KS1 2005 level 3

Here is a shape.

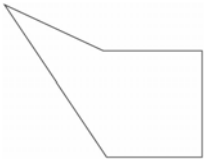
Put a tick (✓) on the shape below which is the same as the one above.



KS2 2005 Paper B level 3

- **Use a set-square to draw right angles and to identify right angles in 2-D shapes; compare angles with a right angle; recognise that a straight line is equivalent to two right angles**

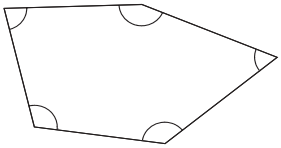
Look at this shape.



How many right angles does it have?

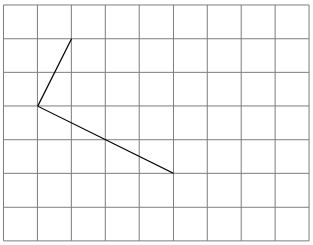
KS1 2005 level 3

Look at this shape.
Tick (✓) each angle that is less than a right angle.



KS2 2009 Paper B level 3

Draw two more straight lines to make a rectangle.
Use a ruler.

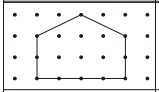
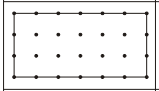
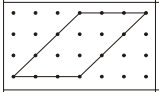
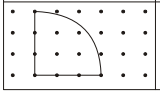


KS2 2001 Paper A level 3

A shape has 4 right angles.
It has 4 sides which are not all the same length.
Write the name of this shape.

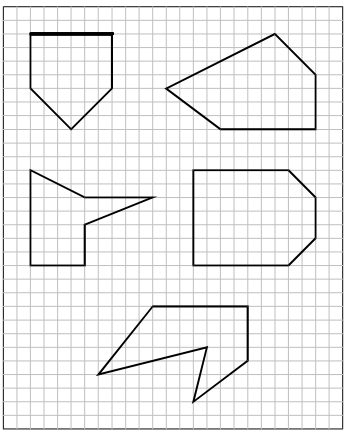
Y4 Optional test 2003 Paper B level 3

Put ticks (✓) and crosses (×) on the chart to complete it correctly. One has been done for you.

Shape	It is a quadrilateral	It has one or more right angles
	×	✓
		
		
		

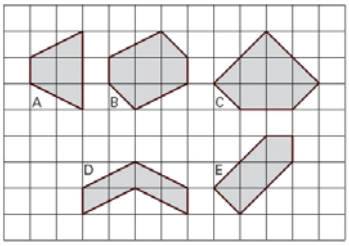
KS2 2006 Paper B level 3

Two of the shapes are hexagons and have two right angles. Put a tick (✓) on each of the two shapes.



KS1 2000 level 3

Here are some shaded shapes on a square grid.

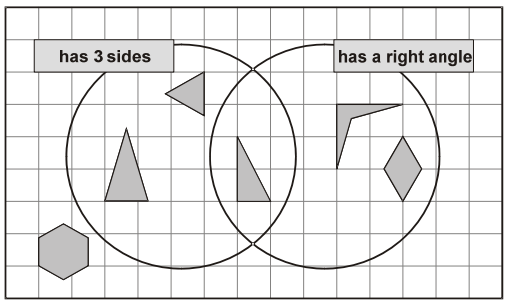


Write the letters of the two shapes which are hexagons.

Write the letters of the two shapes which have right angles.

KS2 2005 Paper A level 3

Here is a diagram for sorting shapes.
One of the shapes is in the wrong place.
Put a cross (×) on it.



KS2 2008 Paper B level 3

Measuring

- **Know the relationships between kilometres and metres, metres and centimetres, kilograms and grams, litres and millilitres; choose and use appropriate units to estimate, measure and record measurements**

Look at the mug I am holding.

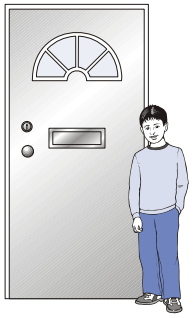
One of these amounts is the estimate of the capacity of this mug. The amounts say:

one metre, one litre, one centimetre, one quarter of a kilogram, one quarter of a litre.

Tick the correct amount.

KS1 2005 level 3 [oral]

Ravi walks through the front door of his house.



Tick (✓) the height the door is most likely to be.

1 metre

2 metres

5 metres

10 metres

100 metres

KS1 2009 level 3

Two of these sentences could be true. Tick (✓) the two sentences that could be true.

☐ Adam's pencil is 12 centimetres long.

☐ Leah is 12 metres tall.

☐ Jake's glass holds 12 litres of milk.

☐ Kate's younger sister weighs 12 kilograms.

Y4 optional test 2003 Paper A level 3

Katie's glass holds a quarter of a litre when it is full. She nearly fills it to the top with juice.

Tick (✓) the approximate amount of juice she puts in the glass.

4 millilitres	☐
20 millilitres	☐
120 millilitres	☐
220 millilitres	☐
420 millilitres	☐

Y3 Optional test 2003 Paper B level 4

How many grams equal one kilogram?

KS1 2003 level 3

How many centimetres are there in half a metre?

KS2 2005 Mental test level 3

Kate has a piece of ribbon one metre long.
She cuts off 30 centimetres.

How many centimetres of ribbon are left?

KS2 2007 Paper A level 3

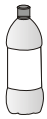
Sita said: 'On my third birthday I was 95 cm tall.
Now I am 28 cm taller.
How tall is Sita now?

KS1 2003 level 3

Sita has 3 m 60 cm of ribbon.
She cuts it into 3 equal pieces.
How long is each piece?

KS1 2004 level 3

How many small bottles of water will fill the large bottle?



small bottle of water

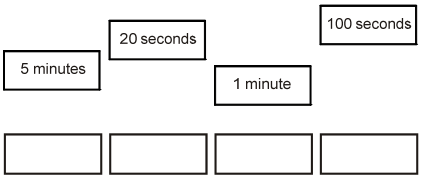
$\frac{1}{4}$ litre

large bottle of water

2 litres

KS1 2009 level 3

Put these times in order, starting with the shortest.



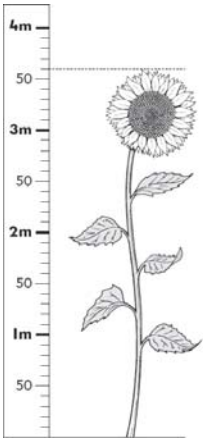
shortest

KS2 2008 Paper A level 3

- **Read, to the nearest division and half-division, scales that are numbered or partially numbered; use the information to measure and draw to a suitable degree of accuracy**

Draw another line 3 cm longer than this line.
Use a ruler.

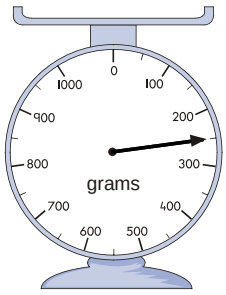
Y4 optional test 2003 Paper A level 3



How tall is the sunflower?

KS1 2005 level 3

Ravi has a kitten.
The scale shows the weight of the kitten.



How much does the kitten weigh?

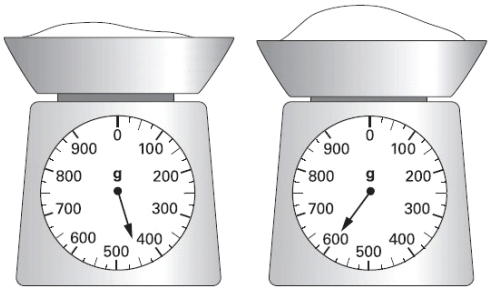
KS1 2009 level 3

This scale shows how much Mrs Patel weighs.

How much does Mrs Patel weigh?

Y4 Optional test 2003 Paper A level 3

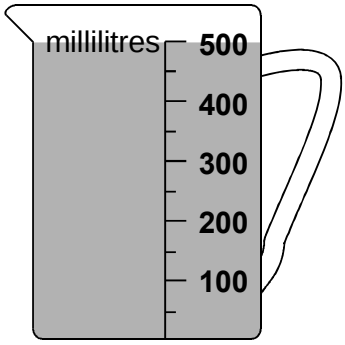
Emily is making a cake. She puts flour on the scales. She then adds sugar to the flour.



How much sugar does she add?

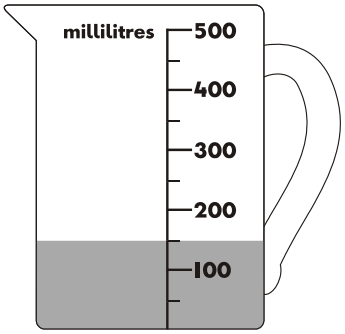
Y5 optional test 2003 Paper B level 3

This jug has water in it.



Ravi pours 150 millilitres of water out of this jug.
How much water will be left in the jug?

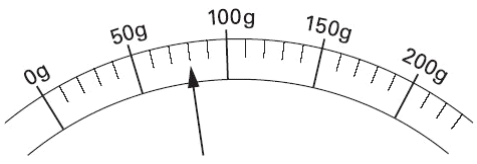
KS1 2001 level 3



Kemi needs 450 millilitres of water.
How much more water does she needs to put in the jug?

KS1 2007 level 3

Here is a scale which shows the weight of a letter.

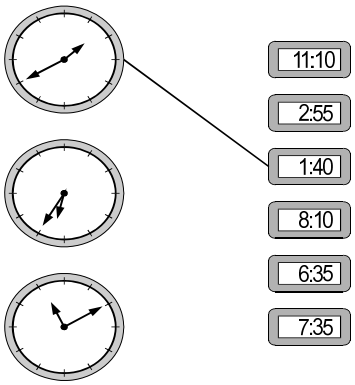


How much does the letter weigh?

Y3 Optional test 2003 Paper A level 3

- **Read the time on a 12-hour digital clock and to the nearest five minutes on an analogue clock; calculate time intervals and find start or end times for a given time interval**

Here are three clock faces. Match each clock face to the same time on a digital clock.



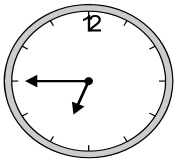
KS2 2000 level 3

This was the time on Selina's watch when she set off for a walk.

What time did the watch show 20 minutes before this?
What time did it show an hour and a half after she set off for the walk?

KS2 2001 Paper A level 3

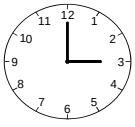
Here is a clock.



How many minutes is it until this clock shows 7:30?

KS2 2003 Paper B level 3

Harry leaves school at

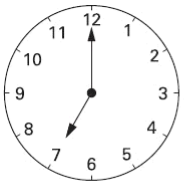


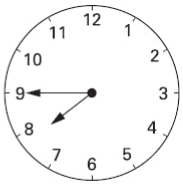
He gets home at

How long does he take to get home?

KS1 2003 level 3

These clocks show the start and finish times of a TV programme.





For how many minutes does the programme last?

Y4 Optional test 2003 Paper A level 3

Harry does English and maths homework each week. It takes him a total of two and a half hours.

He spends 80 minutes doing English homework.
How many minutes does he spend doing maths homework?

KS1 2004 level 3

A week has 7 days.
How many weeks are there in 35 days?

KS1 2000 level 2a [oral]

How many minutes are there in a quarter of an hour?

Y4 optional test 2003 Mental test level 3

How many minutes are there in an hour and a half?

KS2 2000 Mental test level 3

What time is it half an hour after ten-fifteen?

KS2 2009 Mental test level 3

What is the time twenty minutes after nine fifty-five?

KS2 2002 Mental test level 3

My watch shows two-fifty p.m.
What time will it show in thirty minutes?

KS2 2001 Mental test level 3

A train should arrive at 6:45.
It is fifteen minutes late.
At what time does it arrive?

KS1 2007 level 3 [oral]

Jane leaves home at ten-fifteen.
It takes her half an hour to get to the seaside.
At what time does Jane get to the seaside?

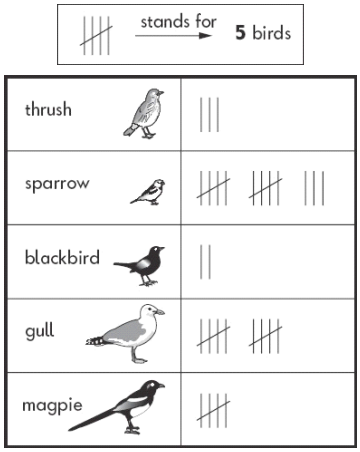
KS1 2005 level 3 [oral]

Handling data

- **Answer a question by collecting, organising and interpreting data; use tally charts, frequency tables, pictograms and bar charts to represent results and illustrate observations; use ICT to create a simple bar chart**

Jane made a tally chart.

Birds I saw



How many more gulls than blackbirds did she see?

KS1 2005 level 3

Some children were asked to choose their favourite animal in the zoo. This table shows the results.

	Girls	Boys
zebra	9	3
lion	4	9
giraffe	7	4
monkey	8	7
elephant	6	5

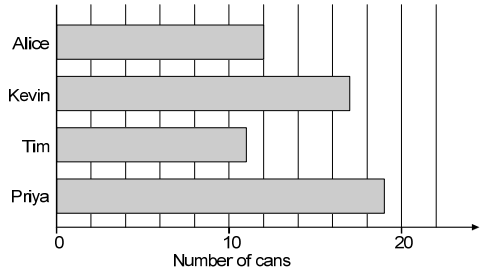
How many more girls than boys chose giraffes?

How many more boys chose lions than elephants?

Which animal was chosen by the greatest number of children?

KS2 2007 Paper B level 3

Some children collect cans for recycling.
Here is a chart of how many cans they collect in the first week.

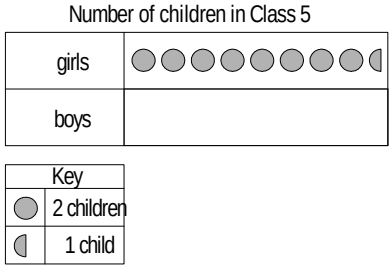


How many cans has Kevin collected?

Alice's target is to collect 30 cans. How many more cans does Alice need to reach her target?

KS2 2003 Paper B level 3

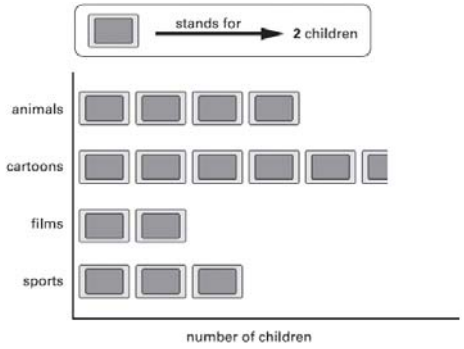
Look at this pictogram.



There are 12 boys in Class 5. Show this on the pictogram.

KS1 2002 level 2a

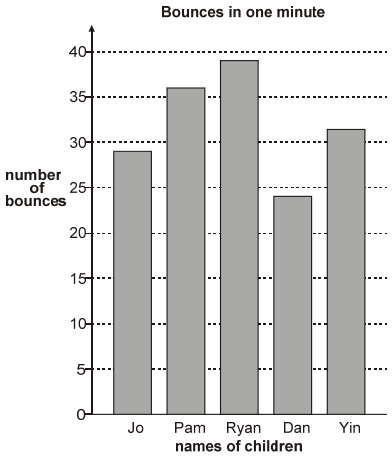
Kiz asked each child in his class, 'What kind of television programme do you prefer to watch?' Here are his results.



How many more children prefer to watch cartoons than films?

Y5 Optional test 2003 Paper B level 3

Look at this graph.



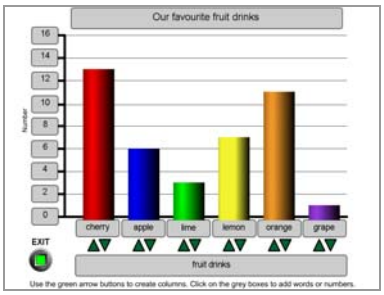
Who bounced the ball between 25 and 35 times?

How many times did Pam bounce the ball?

KS1 2004 level 3

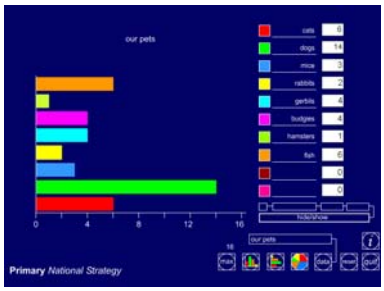
Examples of the use of ICT

Some children chose their favourite fruit drink.
How many more children chose cherry than lime?
What was the second most popular fruit drink?
Which fruit drink did 7 children choose?



Handy graph

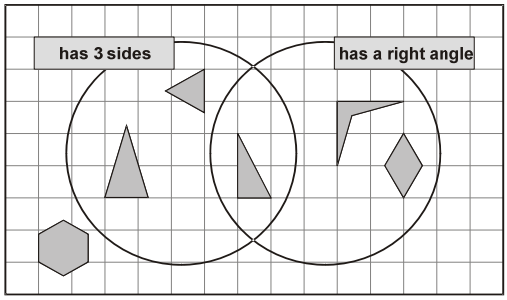
This graph shows the pets that a class of children own. Two more children join the class. One has a budgie. The other has a cat and a dog. Add this information to the graph.



ITP Data handling

- **Use Venn diagrams or Carroll diagrams to sort data and objects using more than one criterion**

Here is a diagram for sorting shapes.
One of the shapes is in the wrong place.
Put a cross (×) on it.



KS2 2008 Paper B level 3

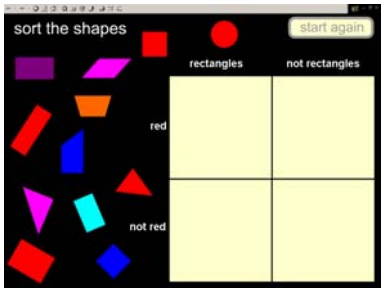
Write each letter in the correct place on the diagram. One has been done for you.

T N P S

	curved lines	**no** curved lines
straight lines		
no straight lines	S	

Y4 optional test 2003 Paper A level 3

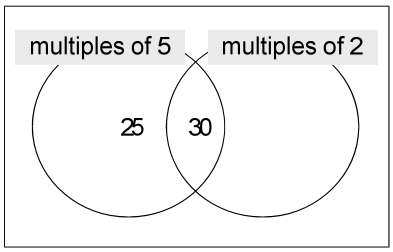
Drag each shape to the correct part of the diagram.



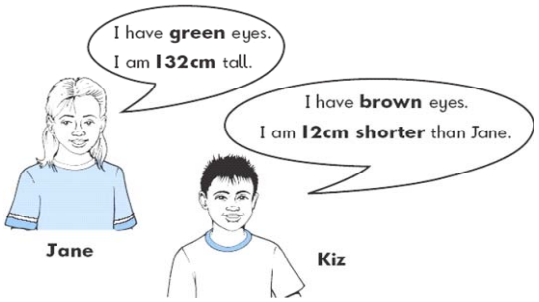
Carroll diagram

Write each of these numbers in its correct place on the sorting diagram.

40 8 15



KS2 2000 Paper A level 3



Write Jane and Kiz in the correct boxes on the sorting diagram.

	has brown eyes	does not have brown eyes
is shorter than 120 cm		
is 120cm tall		
is taller than 120cm		

KS1 2005 level 3

Acknowledgment

Questions from various QCA papers. © Qualifications and Curriculum Authority. Used with kind permission.
QCA test questions and mark schemes can be found at www.testbase.co.uk