

'Now we are ready to start the test.

For the first group of questions you will have 5 seconds to work out each answer and write it down.'

1	Multiply seven by seven.
2	How many nines are there in fifty-four?
3	What number should you add to minus three to get the answer five?
4	I'm thinking of a number. I call it n . I square my number then add four. Write an expression to show the result.
5	What number is five cubed?
6	A bat flies at an average speed of thirty kilometres per hour. At this speed, how far would it fly in one minute?

'For the next group of questions you will have 10 seconds to work out each answer and write it down.'

7	The bar chart shows when pupils in a class were born. Altogether, how many of the pupils were born in the autumn?
8	Look at the line drawn on the grid. Write the coordinates of any point that is on this line.
9	Subtract nought point seven five from six.
10	Look at the shaded triangle drawn on a centimetre square grid. What is the area of this triangle?

'Now turn over your answer sheet.'

11	How many pints are about the same as one litre? Ring the best answer on your answer sheet.
12	A fair spinner has eight equal sections with a number on each section. Five of them are even numbers. Three are odd numbers. What is the probability that I spin an even number?
13	Twenty-five per cent of a number is seven. What is the number?
14	Look at the equation. When y equals twenty-six, what is the value of x ?

Key stage 3 mathematics 2003
Mental mathematics Test A

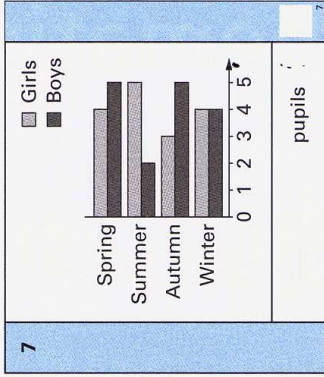
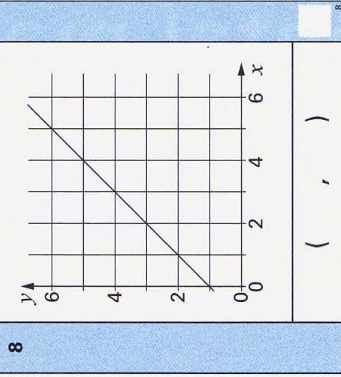
First name _____

Last name _____

School _____

Total marks

Time: 10 seconds

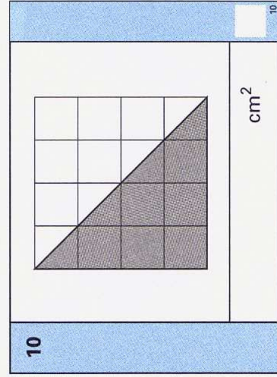


Time: 5 seconds

1	<input type="text"/>	<input type="text"/>	60	<input type="text"/>
2	<input type="text"/>	<input type="text"/>		<input type="text"/>
3	<input type="text"/>	<input type="text"/>	-3	<input type="text"/>
4	<input type="text"/>	<input type="text"/>	n	<input type="text"/>
5	<input type="text"/>	<input type="text"/>		<input type="text"/>
6	<input type="text"/>	km	30 km per hour	<input type="text"/>

9

0.75

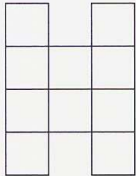
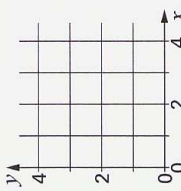
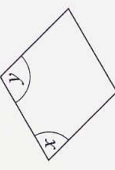


15	The scale on my map is four centimetres to one kilometre. On the map the distance to the rail station is twenty centimetres. How many kilometres is it to the rail station?
16	What is three-fifths of forty pounds?
17	What is the volume of a cuboid measuring five centimetres by six centimetres by seven centimetres?
18	On average, the driest place on earth gets only nought point five millimetres of rain every year. In total, how much rain would it expect to get in twenty years?
19	Jenny and Mark share some money in the ratio two to three. Jenny's share is one hundred and ten pounds. How much is Mark's share?
20	Look at the expression. When k is four, work out the value of this expression.
21	Look at the inequality. How many integer solutions are there?

'For the next group of questions you will have 15 seconds to work out each answer and write it down.'

22	Look at the shape drawn on a square grid. It has two lines of symmetry. Shade two squares so that the shape still has two lines of symmetry.
23	I am thinking of a two-digit number that is a multiple of eight. The digits add up to six. What number am I thinking of?
24	Twenty-one out of thirty-six pupils said they watched Top of the Pops. What angle would show this on a pie chart?
25	On the grid, sketch the straight line with equation y equals three.
26	The diagram shows a rhombus. The angle marked x is seventy-five degrees. What is the size of the angle marked y ?
27	What would be the last digit of one hundred and thirty-three to the power four?
28	The mean of two numbers is eight. One of the numbers is minus four. What is the other number?
29	The area, in square centimetres, of a circle is nine pi. What is the radius of the circle?
30	Fill in the missing number in the number sentence.

'Put your pens down. The test is finished.'

Time: 10 seconds continued		Time: 15 seconds	
11	1 2 3 4 5	22	
12		23	
13	25%	24	$\frac{21}{36}$
14	$y = 2x + 6$	25	
15	km 4 cm : 1 km	26	
16	£ £40	27	133^4
17	cm ³ 5 cm by 6 cm by 7 cm	28	8
18	mm 0.5 mm	29	cm 9π
19	£ 2 : 3	30	$3.4 \times \dots = 6.8 \times 3.5$
20	$(k + 1)(k + 2)$		
21	$2 \leq x \leq 8$		