Key Stage 2

Mathematics

Paper 2: Reasoning

First Name	
Middle Name	
Last Name	
Date of Birth	Day Month Year
School Name	

Cambridgeshire County Council

Cambs Maths Team

You **must not** use a calculator to answer any questions in this test.

Questions and answers

You have **40 minutes** to complete the test.

Follow the instructions for each question.

Work as quickly and as carefully as you can.

If you need to do working out, you can use the space around the question.

Some questions have a method box like this:

Show
your
method

For these questions you may get a mark for showing your method.

If you cannot do one of the questions, **go on to the next one.**
You can come back to it later, if you have time.

If you finish before the end, **go back and check your work.**

Marks

The number under each line at the side of the pages tells you the maximum number of marks for each question.

1. Tom asks the children in Year 2 and Year 6 if they walk to school. The graph shows the results.

Legend:
■ walk to school
☐ don't walk to school

Number of children

Year 2: walk to school = 70, don't walk to school = 110
Year 6: walk to school = 120, don't walk to school = 90
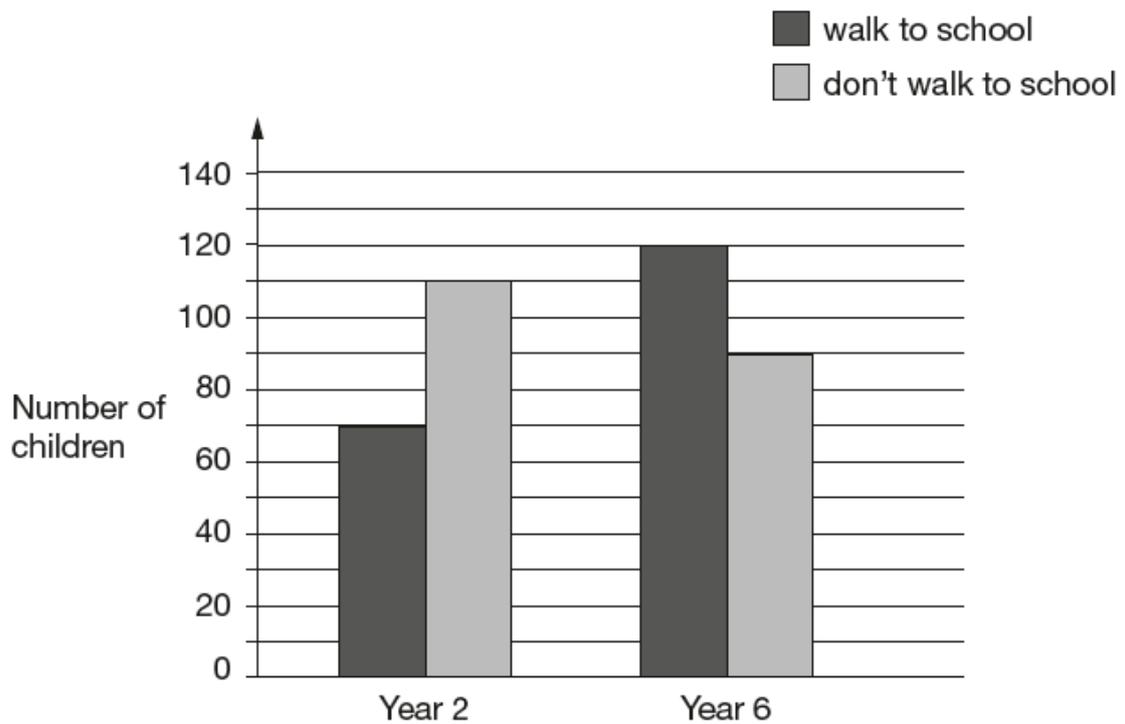
Altogether, how many children walk to school?

1 mark

How many **more** Year 2 children than Year 6 children **don't** walk to school?

1 mark

2.

805   **8,005**   **8,050**   **8,500**   **80,005**

_____

1 mark

3.

Write the missing numbers to make this **multiplication** grid correct.

X	☐	☐
☐	84	56
9	108	72

_____

1 mark

4. This table shows the heights of three mountains

Mountain	Height in metres
Kangchenju	8,586
Bogda Feng	5,445
Snowden	1,085

How much higher is Mount Kangchenju than the combined height of the other two mountains?

Show your method

m

_____

2 marks

5.

One row has been done for you.

Number	1,000 more
2,700	3,700
73	
	8,088
	17,670

_____

2 marks

6.

2.3   0.32   1.745   0.218

_____   _____   _____   _____

smallest

_____

1 mark

7.

84 months = [ ] years

60 hours = [ ] days

56 days = [ ] weeks

_____

2 marks

8. At the start of July, there were 2,857 toy cars in the shop.
   During July,
   - 6,868 more toy cars were delivered
   - 8,467 toy cars were sold.
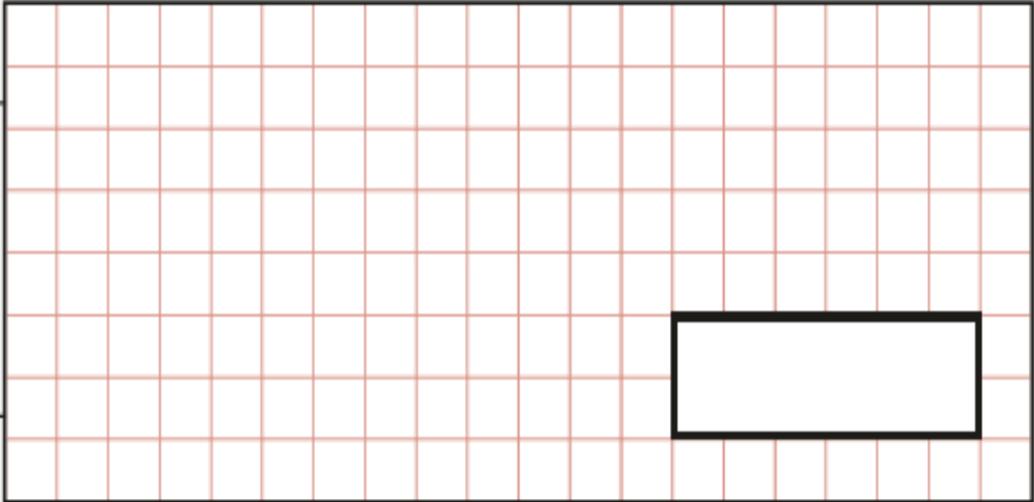
Show your method

_____

2 marks

9.

_____

2 marks

10.
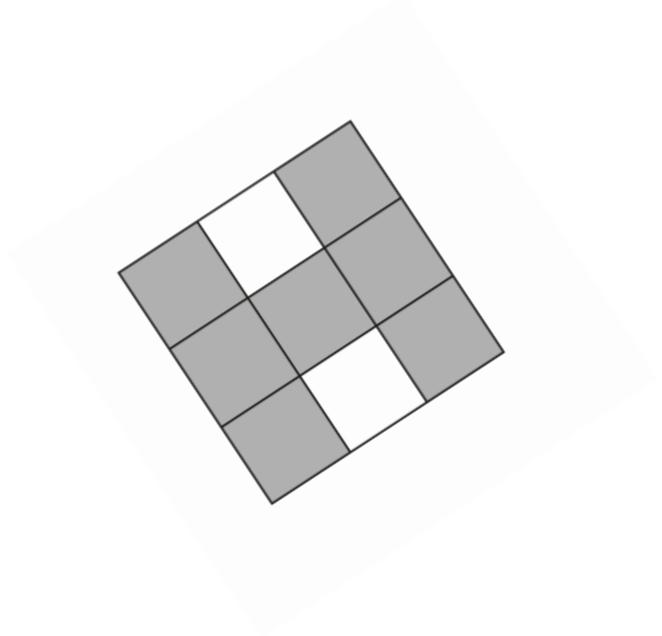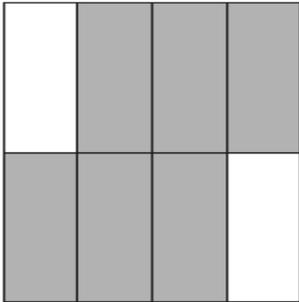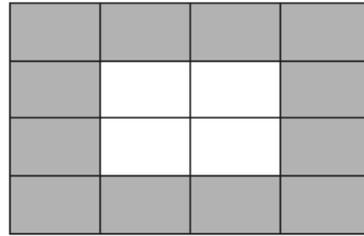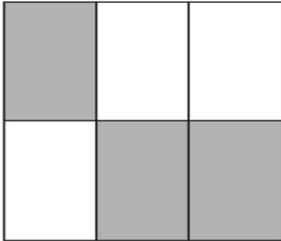
to the nearest 10

to the nearest 100

to the nearest 1,000

_____

2 marks

11. Here is the rule for the time it takes to cook a turkey.

**Cooking time = 35 minutes plus an extra
50 minutes for each kilogram**

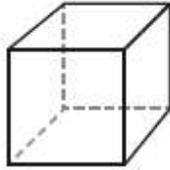How many minutes will it take to cook a 4kg turkey?

minutes

_____

1 mark

What is the mass of a turkey that takes 185 minutes to cook?

kg

_____
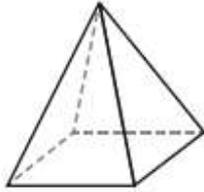
1 mark
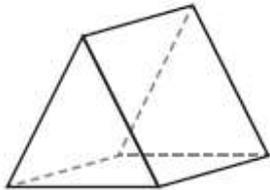
12.   Here are diagrams of some 3-D shapes

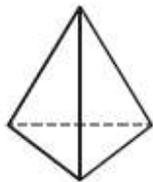Tick each shape that have 3 more edges than vertices.

Cube ☐

Square-based pyramid ☐

Triangular prism ☐

Triangular-based pyramid ☐

_____

2 marks

13. Tom and Karen buy some stickers.

Single stickers   **Pack of 12 stickers**

89p each   **£9.59**

Tom buys a pack of 12 stickers for £9.59

Karen buys 12 single stickers for 89p each

How much more does Karen pay than Tom?

Show your method

£

2 marks

14. Karen planted some seeds.
For every 4 seeds that Karen planted, only 3 seeds grew.
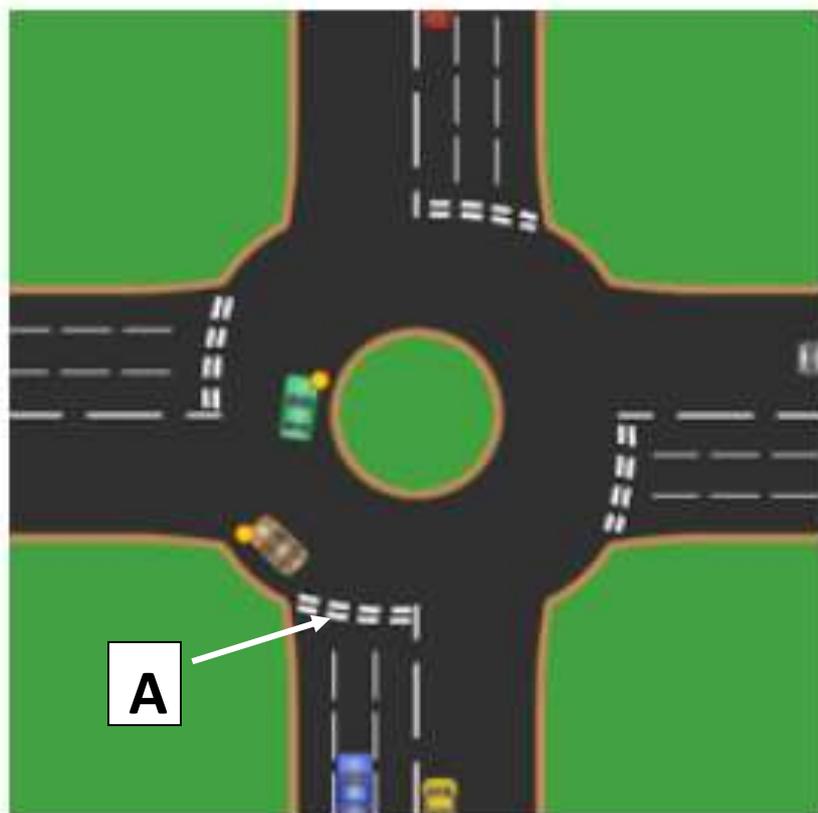Altogether, 18 seeds grew.

How many seeds did Karen **plant?**

_____

1 mark

15. At the end of a TV programme, the year is given in Roman numerals.

MMIX

Write the year MMIX in **figures.**

_____

1 mark

16.   A car goes around a roundabout one and a half times starting at A.

How many **degrees** does it turn through?
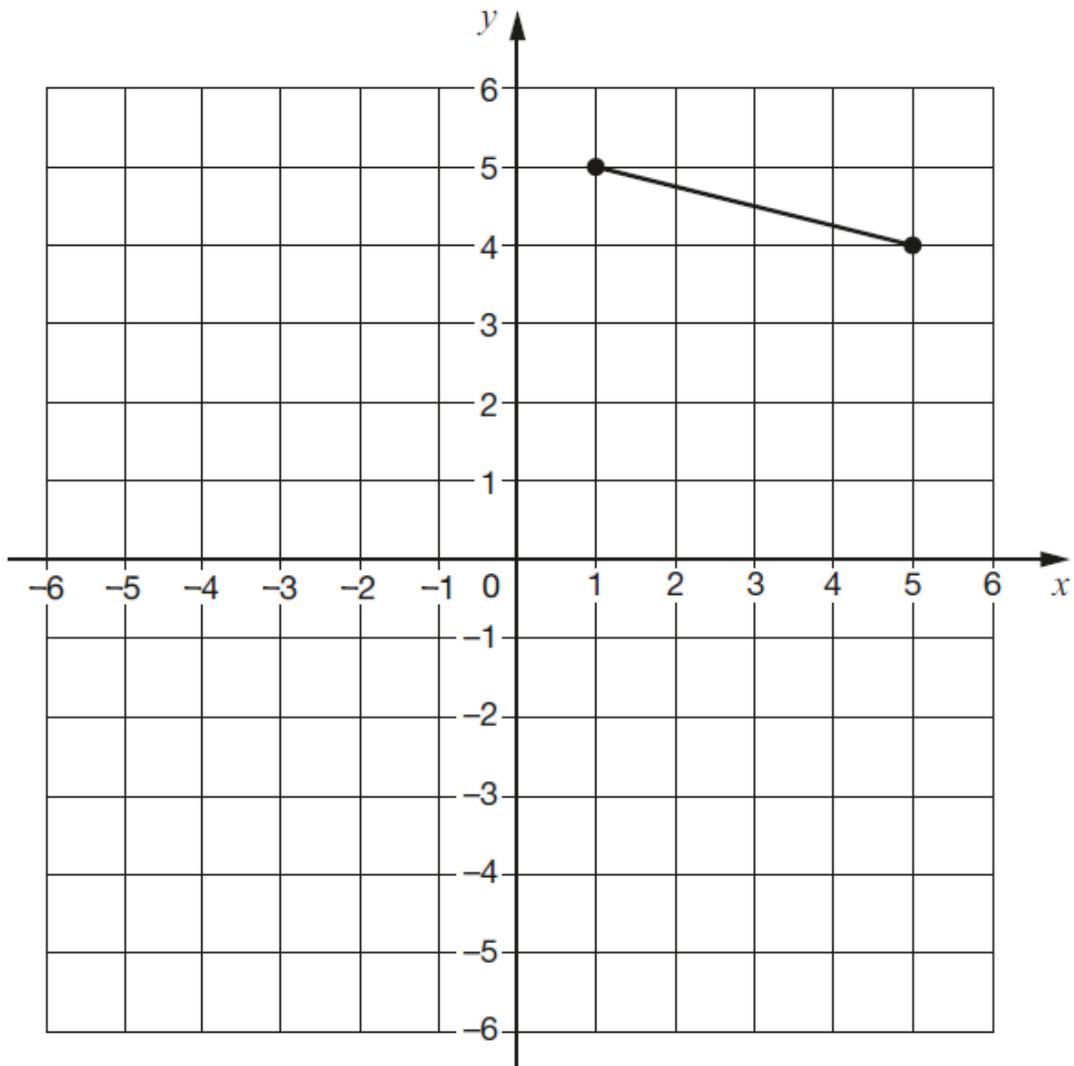
[   ] °

_____

1 mark

17.　　The vertices of a quadrilateral have these coordinates.

(1,5)　　(5,4)　　(-4,1)　　(4, -3)

One side of the quadrilateral has been drawn on the grid.

Complete the quadrilateral.

18.   Chen has a £50 to spend on food. He spends £12 on fruit.

24% of his money was spent on fruit.

Write the missing percentage.

Tracey also has £50 to spend on food. She spends £15 on fruit.

| **%** | of Tracey's money was spent on fruit.

_____

1 mark

19.   Tom posts three large letters.
        The postage costs the same for each letter.
        He pays with a £20 note.
        His change is £14.36

What is the cost of posting **one** letter?

Show
your
method

£

_____

2 marks

20. Karen says,

0.34 is **smaller** than ¾

Explain why she is correct.

_____

1 mark

21.   On a map, 1 cm represents 20km.

0   20   40   60   80   100
kilometres
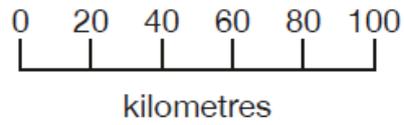
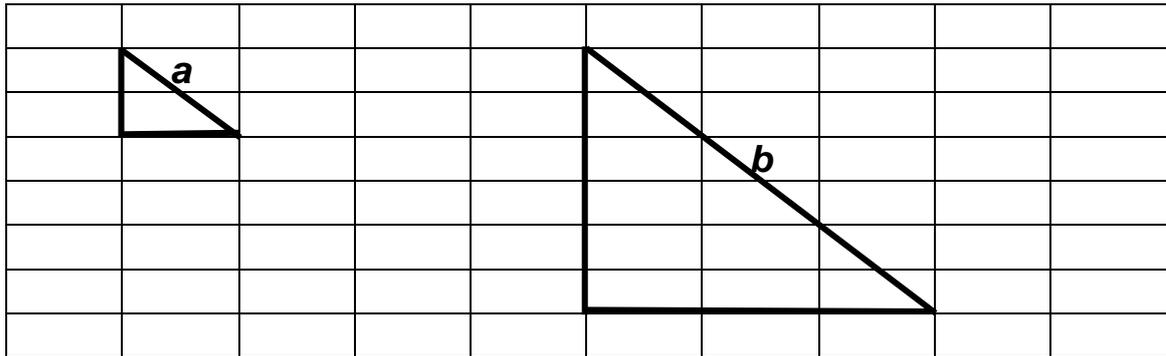The distance between two cities is **330km**

On the map, what is the distance between the two cities?

Show
your
method

cm

_____

2 marks

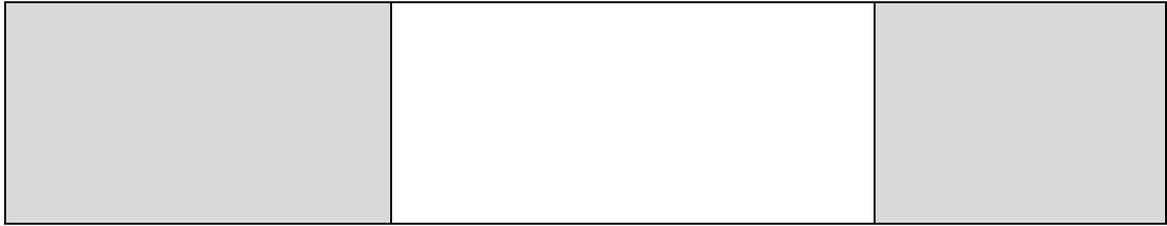22.   Here are two similar right angled triangles.
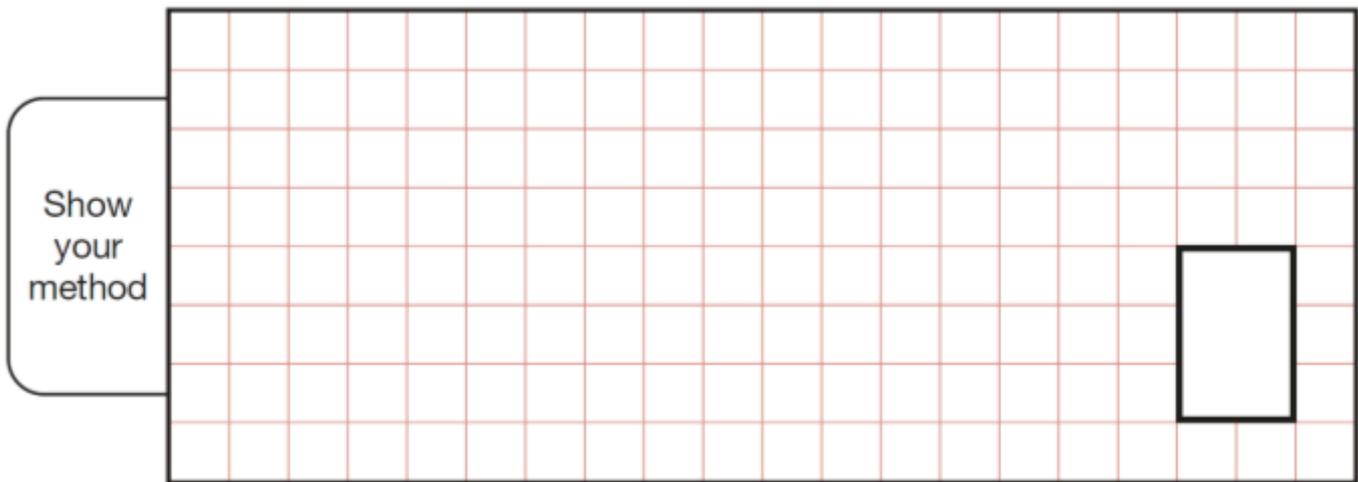

Write the ratio of side a to side b.

$$a:b=\boxed{\qquad : \qquad}$$

_____

1 mark

23. In this rectangle $\frac{1}{3}$ & ¼ are shaded.

What fraction of the rectangle is **not** shaded?

Show your method

_____

2 marks