Mathematics

Year 5

Reasoning Test B

Equipment allowed: pen, pencil, ruler, protractor or angle measurer, eraser.

No other equipment allowed.

Name	
Date	
Total marks	

5

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Please do not write on this page.

Instructions

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

Questions and answers

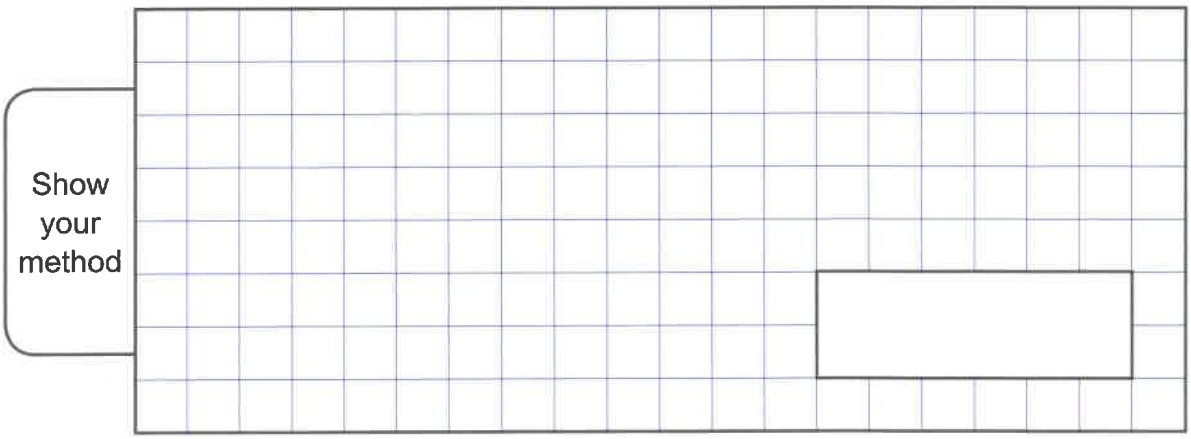
You have **40 minutes** to complete this test.

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:



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 early, **go back and check your work.**

Marks

The number under each box at the side of the page tells you the maximum number of marks for each question.

1 Circle the number that is closest to 150

146 155 142 135 160

1 mark

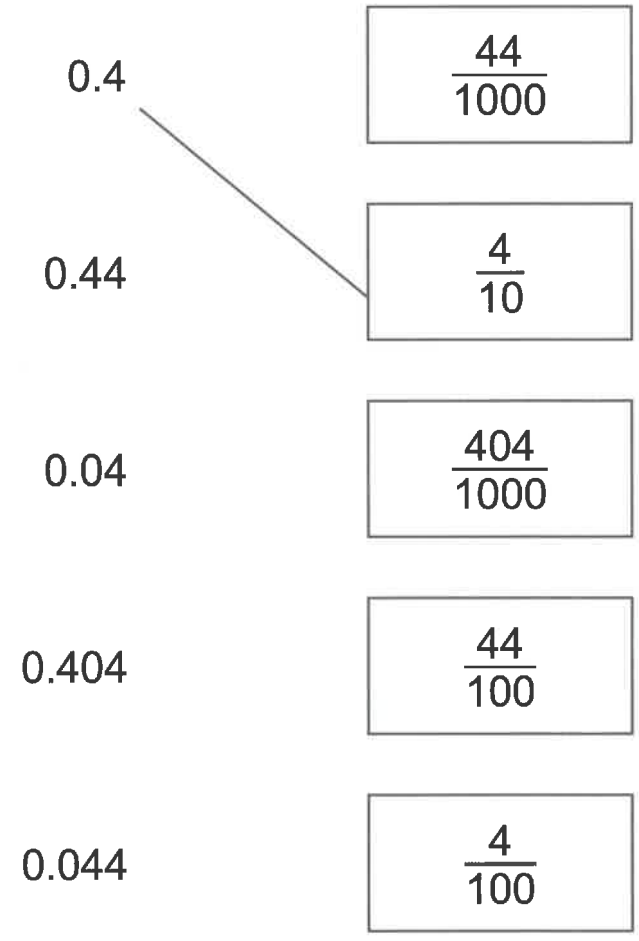
2 The numbers in this sequence decrease by 6 each time.
Write the missing number.

14 8 2 ☐ −10

1 mark

3 Match each number to its equivalent fraction.

One has been done for you.



2 marks

4 Children in a class were asked to vote for their favourite fruit.

30% voted for bananas.

10% voted for oranges.

The rest voted for apples.

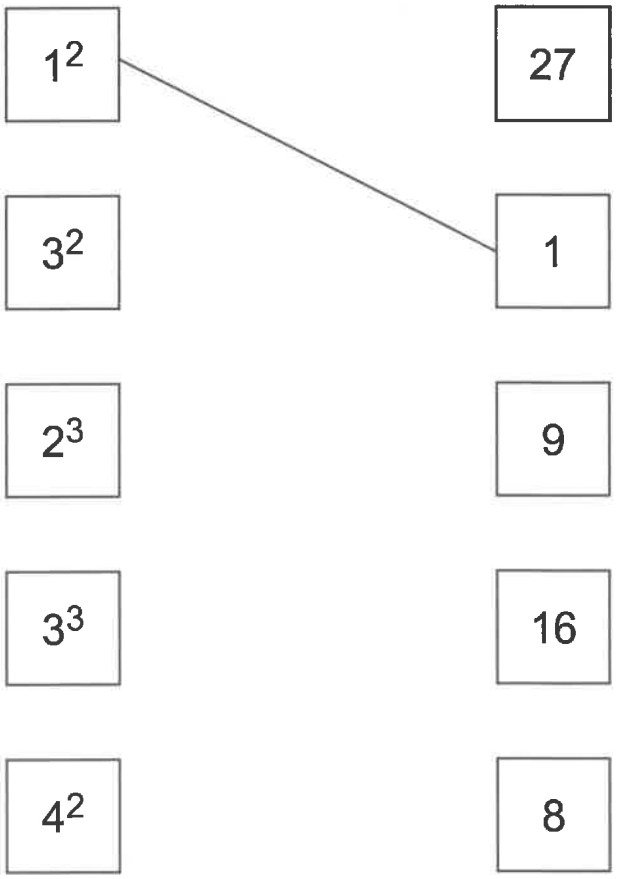
What percentage voted for **apples**?

% ☐

1 mark

5 Match the pairs.

One has been done for you.



☐

2 marks

6 **12** schools take part in a hockey tournament.

Each team brings **16** players.

How many players are there altogether?

players

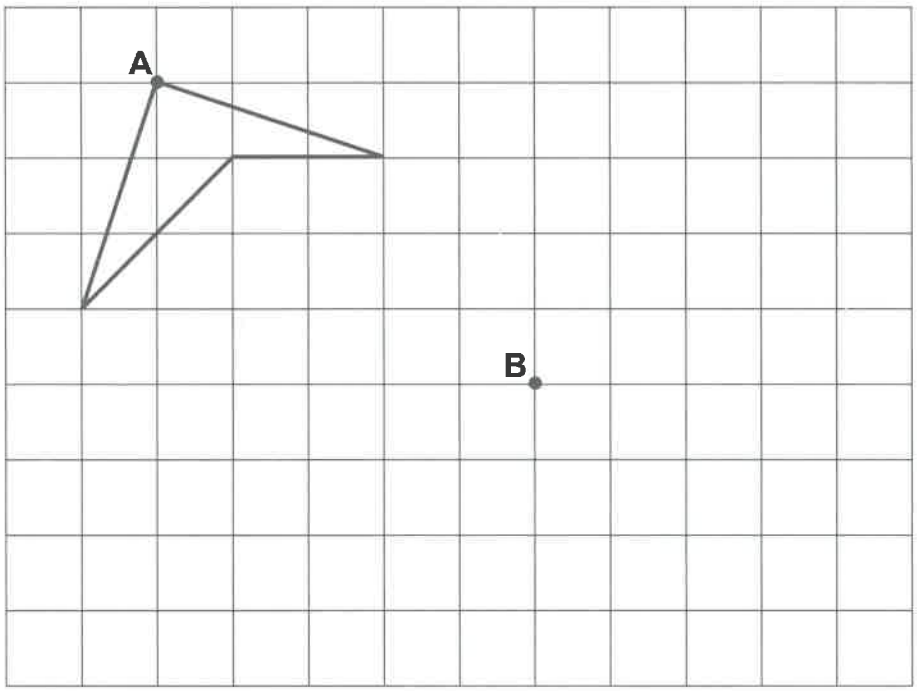
1 mark

7 Here is a shape on a square grid.

The shape is translated so that point **A** moves to point **B**.

Draw the shape in its new position.

Use a ruler.



2 marks

8 Lin walks 7 miles.

1 mile is approximately 1.6 kilometres.

Use this information to calculate how many kilometres Lin walks.

km

1 mark

9 Write the missing numbers in the boxes.

730 + ☐ = 1,000

1 mark

800 − ☐ = 250

1 mark

10 Write this number in figures.

one million, one thousand and one

1 mark

11 Here is part of a bus timetable.

Station	06:30	07:30	08:30	09:30
Brampton Road	06:46	07:46	08:46	09:46
College	06:58	07:58	—	09:58
Park Street	07:13	08:13	09:08	10:13
High Street	—	08:34	09:29	10:34

How long does the **08:30** bus from the **Station** take to reach the **High Street**?

minutes

1 mark

James is at **Brampton Road** at **9:30 am**.

He wants to travel to **Park Street**.

He catches the next bus.

At what time will he arrive at **Park Street**?

:

1 mark

12 This table shows the population of Britain's ten largest cities.

City	Population
Birmingham	1,085,810
Bristol	535,907
Edinburgh	482,005
Greater Glasgow	1,209,143
Leeds	474,632
Leicester	443,760
Liverpool	552,267
Greater London	8,135,667
Manchester	510,746
Sheffield	518,090

Which city has the **fifth largest** population?

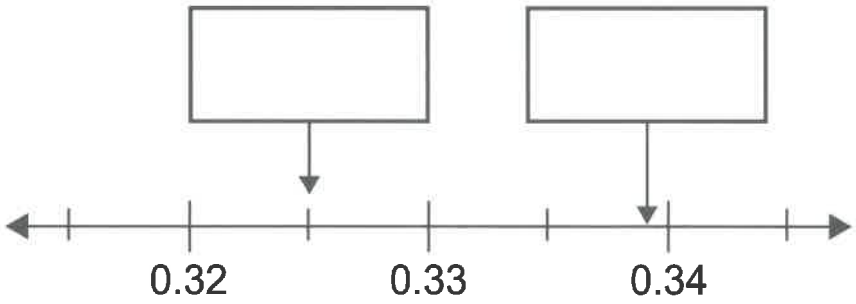
_____

1 mark

What is the population of **Liverpool**, rounded to the **nearest 100,000**?

1 mark

13 Write the missing numbers in the boxes.



1 mark

1 mark

14 Complete the conversion table below.

One row has been done for you.

kg	g
0.5kg	500g
1.3kg	
	7,250g

1 mark

1 mark

15 Write in the missing number to make this calculation correct.

$5 \times 4 = \square \div 4$

1 mark

16

Lin buys **4** bags of apples.

Ella buys **3** bags of oranges.

How much more does Lin pay than Ella?

Show your method

p

2 marks

17 The floor of the PE hall is square.

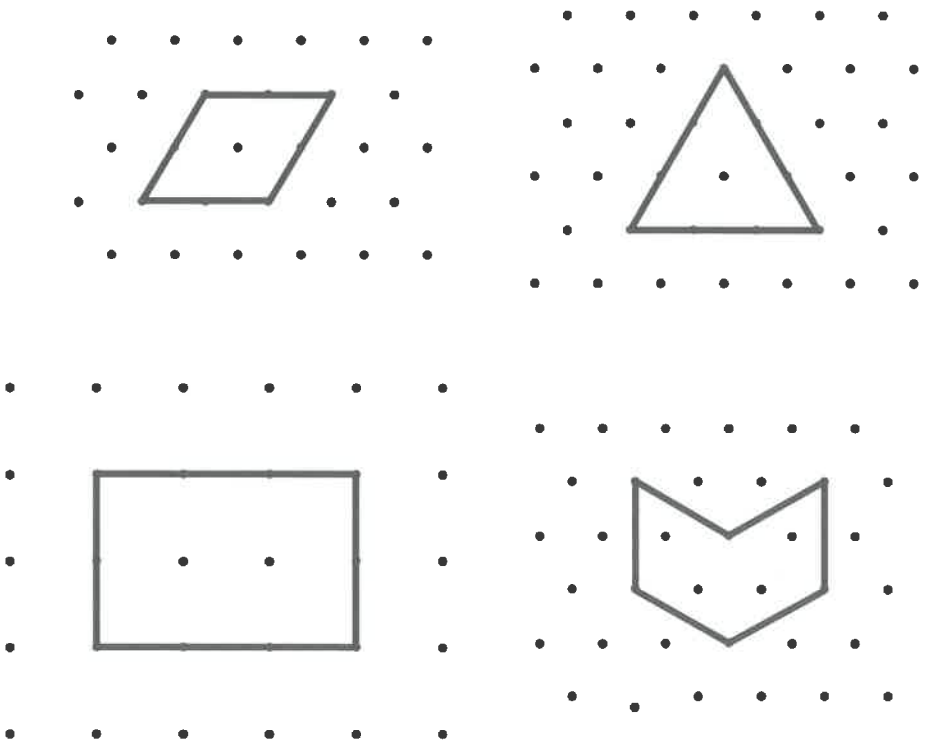
Each side of the floor measures **8 m**.

What is the **area** of the floor?

m^2

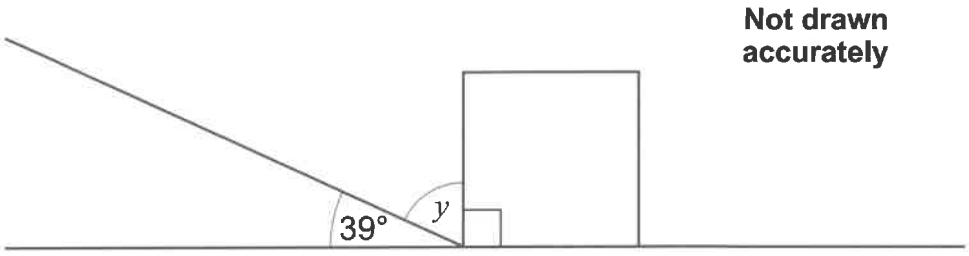
1 mark

18 Tick (✓) the shape that is **regular**.



1 mark

19



Calculate the size of angle y.

Show your method

o

2 marks

20 Write these numbers in order, starting with the **smallest**.

$1\frac{1}{2}$ $\frac{5}{4}$ $1\frac{1}{3}$ $\frac{6}{5}$

smallest

1 mark

21 There are **25** children in Year 5.

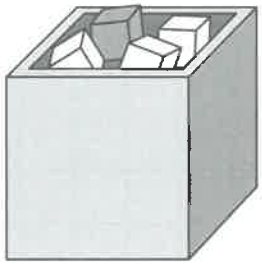
10 of them are girls.

What **percentage** of Year 5 are girls?

%

1 mark

22



There are **24** bricks in a box.

$\frac{1}{3}$ of the bricks are blue.

$\frac{3}{8}$ of the bricks are yellow.

The rest are green.

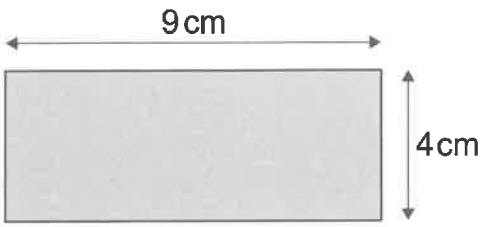
How many green bricks are in the box?

Show your method

green bricks

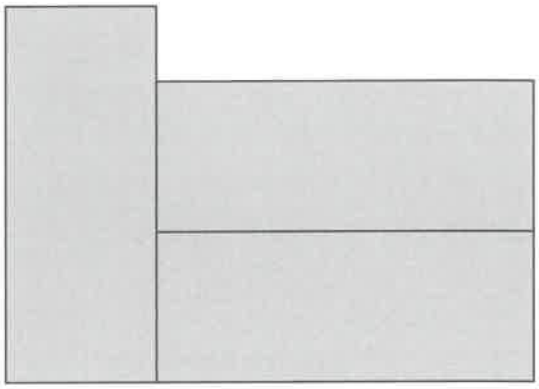
2 marks

23 James has some identical rectangles.



Not to scale

He makes this shape using three of the rectangles.



What is the perimeter of his shape?

Show your method

cm

2 marks

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