Progress check

Year 6

Mathematics

Paper 2: reasoning and problem solving

First name						
Middle name						
Last name						
Date of birth	Day		Month		Year	
Teacher						

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For more information, please visit **www.whiterosemathshub.co.uk**

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Instructions

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

Questions and answers

You have **35 minutes** to complete this test.

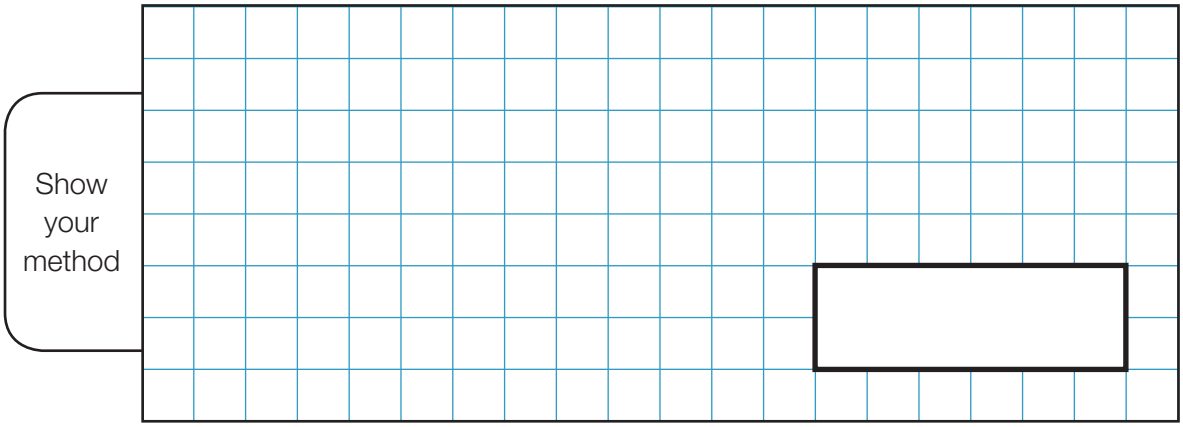
Follow the instructions for each question.

Work as quickly and as carefully as you can.

For this assessment you will require a ruler.

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**.

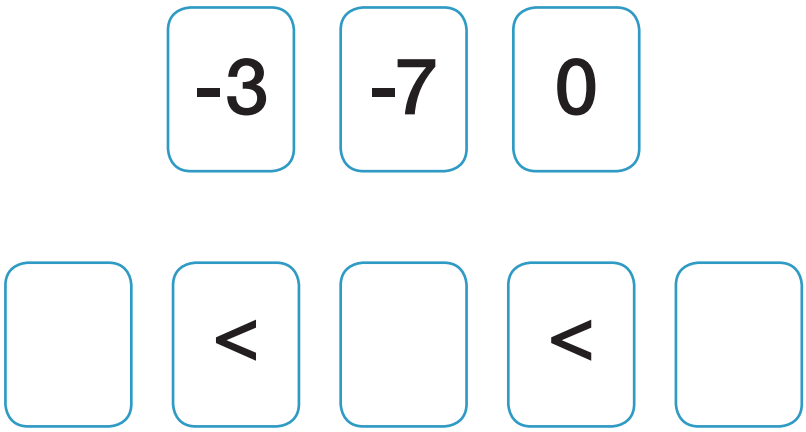
You can come back to it later, if you have time.

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

Marks

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

1 Use each of the digit cards **once** to fill in the boxes.



1 mark

2 Calculate

$$32 + 8 \times 5$$

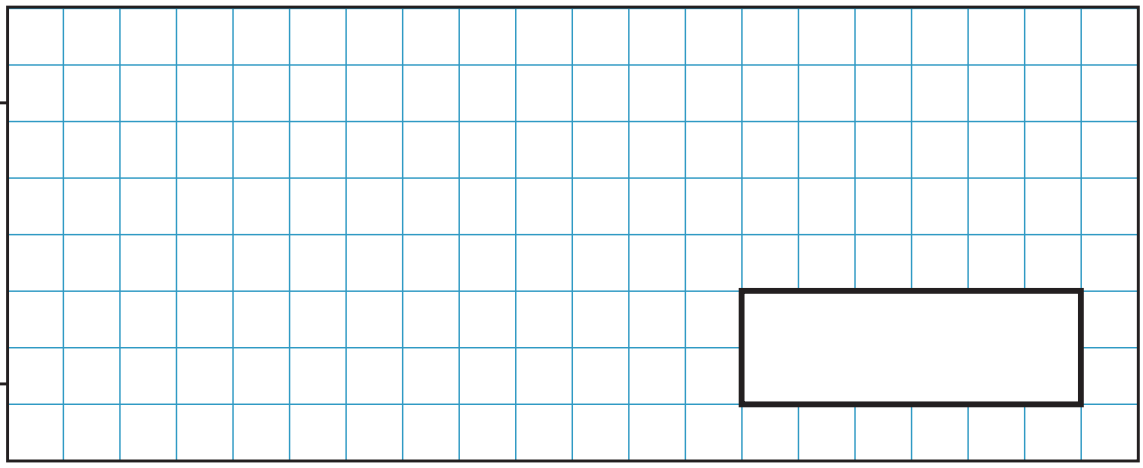
1 mark

3 Here are two number cards.

Find the difference between the numbers.

Two million, three hundred thousand and sixty four	Two million, three hundred and sixty four thousand

Show your method



2 marks

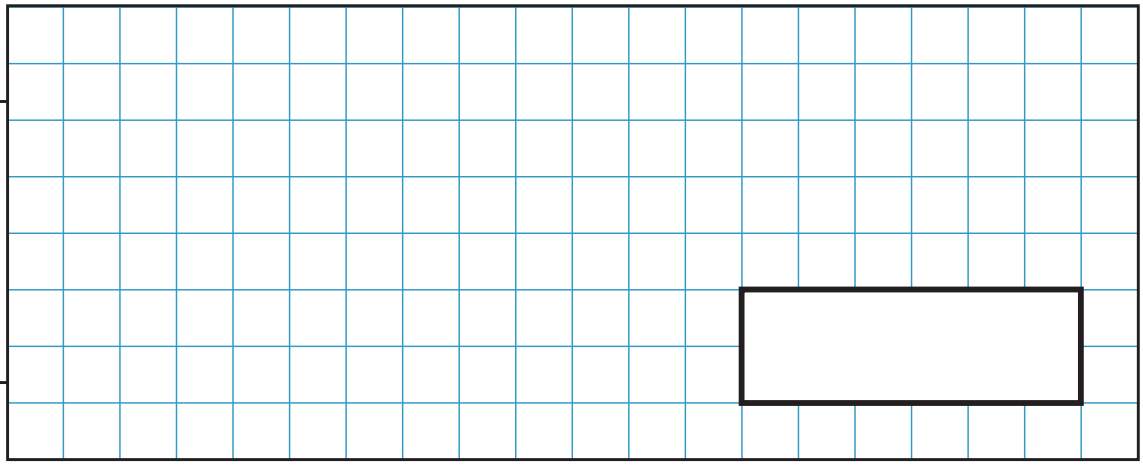
4 Harry has 24 packets of sweets.

In each packet, there are 17 sweets.

Harry gives one third of the sweets to his brother.

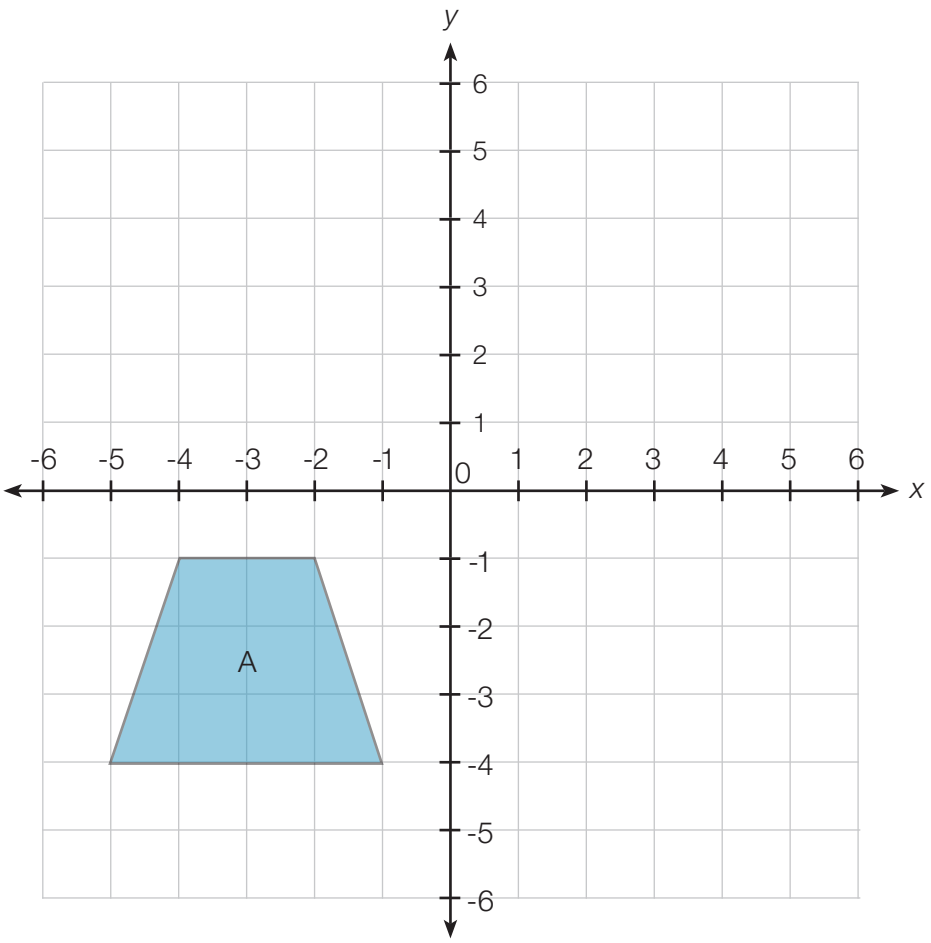
How many sweets does Harry have left?

Show your method



4 marks

5 Here is a co-ordinate grid.



Reflect Shape A in the *y* axis.

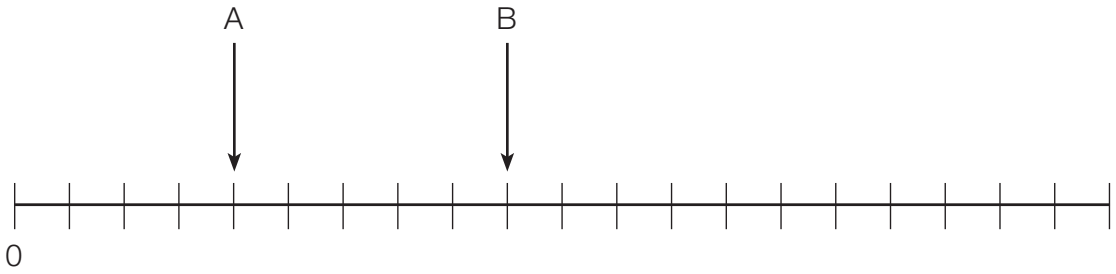
1 mark

Write the co-ordinates of the vertices of your new shape.

1 mark

6 Here is a number line starting at 0

Two numbers are marked on the number line.



A is 20 less than B.

What is the value of B?

2 marks

7 Which is bigger?

$$\frac{3}{4} \text{ or } \frac{2}{3}$$

Explain your answer.

You may use the diagram below to help you.

1 mark

Use **<**, **>** or **=** to make the statements correct.

$$\frac{1}{4} \times \frac{1}{2} \quad \bigcirc \quad \frac{1}{4} \times 2$$

$$\frac{1}{4} \times \frac{1}{3} \quad \bigcirc \quad \frac{1}{4} \div 3$$

2 marks

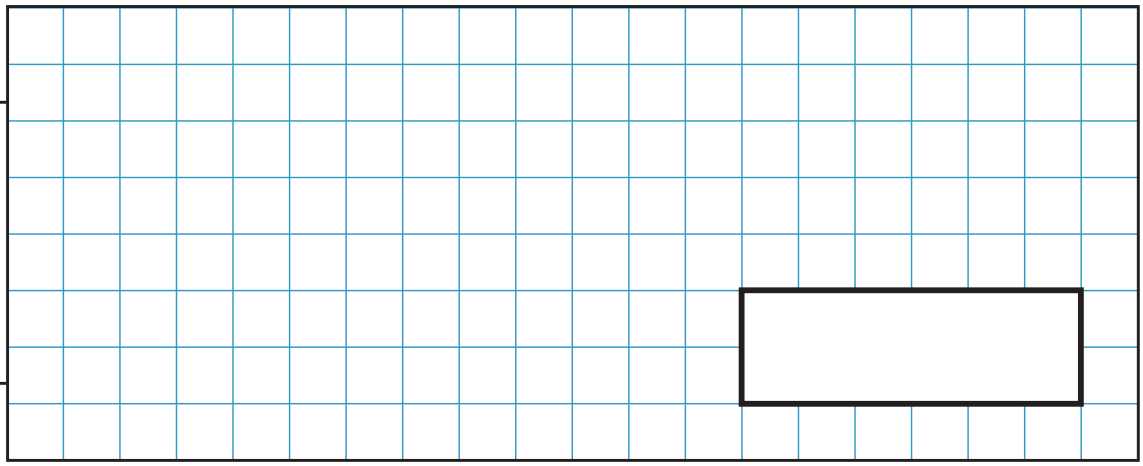
8 Year 6 are organising a school trip.

They need to transport 144 children and 25 adults in mini buses.

Each mini bus holds 14 people.

How many mini buses do they need to book?

Show your method



2 marks

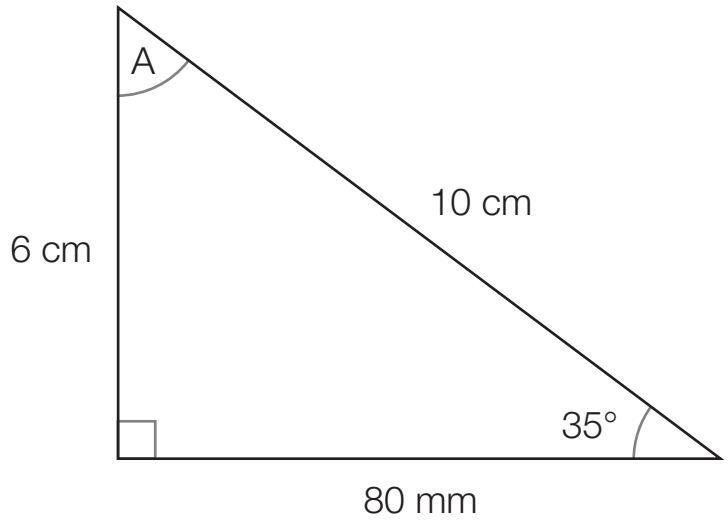
On the trip, there needs to be at least 1 adult for every 6 children.

Are there enough adults on the trip?

Explain your answer.

1 mark

9



Calculate the size of angle A

Show your method

1 mark

Calculate the area of the triangle.

Show your method

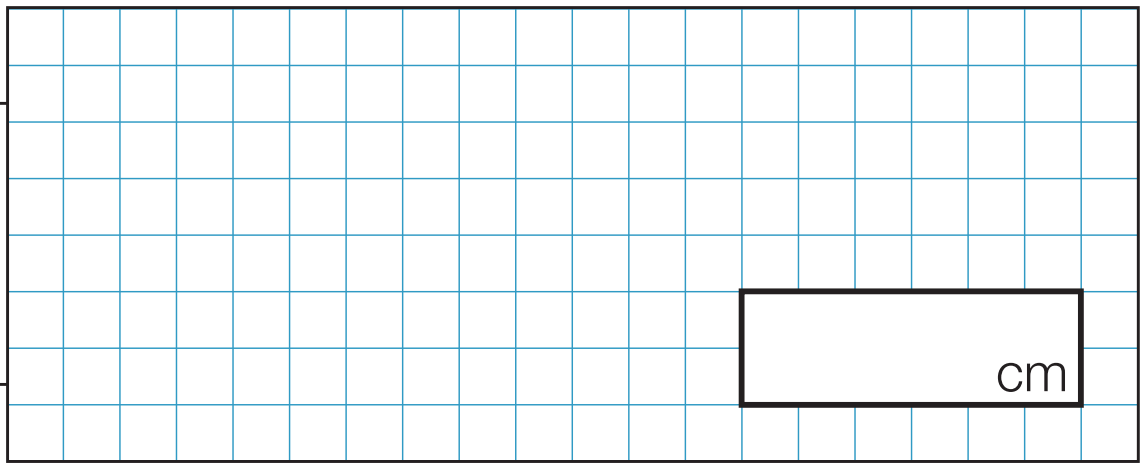
2 marks

The triangle is enlarged.

The perimeter of the new triangle is 96cm.

What is the length of the longest side of the new triangle?

Show your method



2 marks

10 Here are Laura's scores for two mental maths tests.

In test 1 she scored 71%

In test 2 she scored 14 out of 20 marks.

In which test did Laura get the highest percentage?

Show your method

Test

1 mark

In a third test, Laura gets $\frac{3}{4}$ of the marks.

What is Laura's mean percentage over the three tests?

Show your method

%

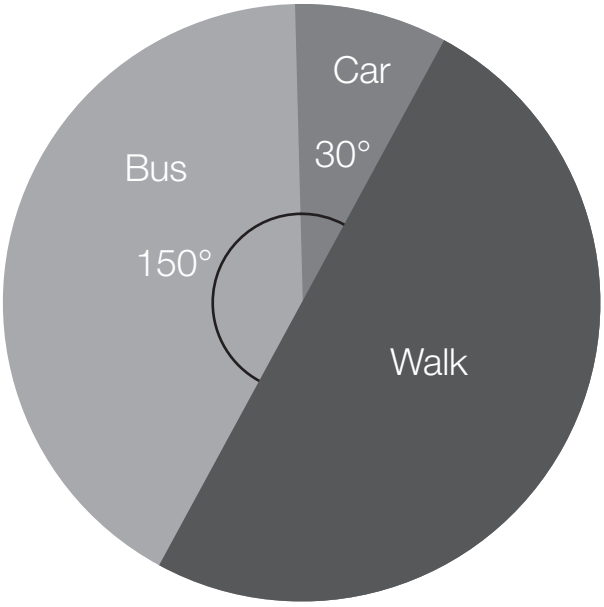
2 marks

11 Year 6 are collecting data on how they travel to school.

Six children travel by car.

Half of the children walk to school.

How many children walk to school?



Show your method

2 marks

12 A jug of lemonade holds three times as much as a glass.

A bottle of lemonade holds 750ml more than a glass.

Together, the jug, the bottle and the glass hold 3.95 litres of lemonade.

Diagram not to scale

How much lemonade is there in the jug?

Show your method

3 marks

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