

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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These assessments have been designed by the White Rose Maths Hub.  
For more information, please visit [www.whiterosemathshub.co.uk](http://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:**

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 page tells you the maximum number of marks for each question.

1

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

-3

-7

0

<

<

1 mark

2

Calculate

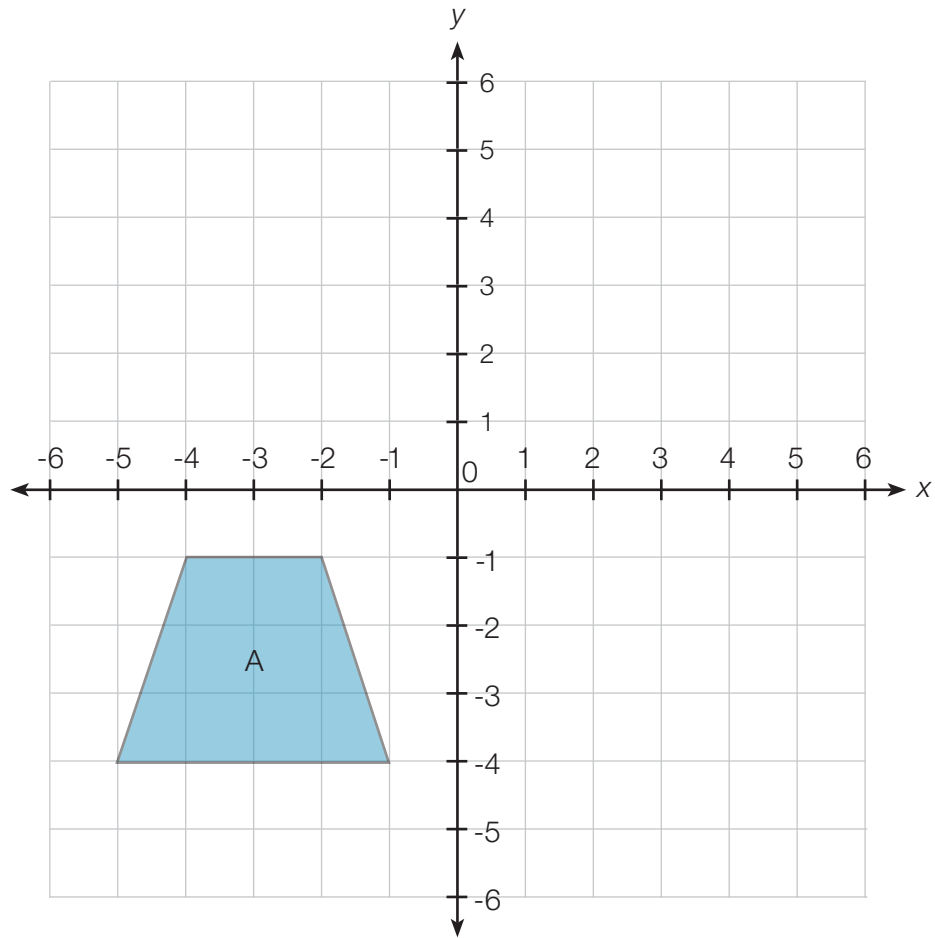
$$32 + 8 \times 5$$

1 mark



5

Here is a co-ordinate grid.



Reflect Shape A in the  $y$  axis.

1 mark

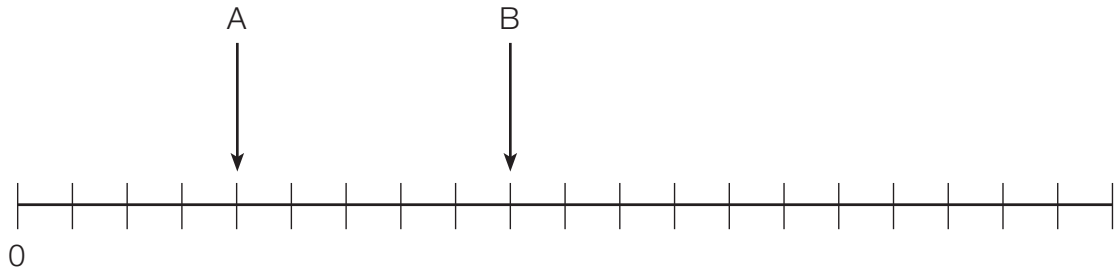
Write the co-ordinates of the vertices of your new shape.

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

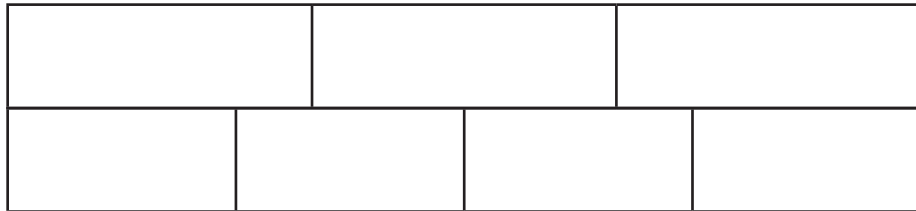
**7**

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

A grid for showing the method. A small rectangle is drawn on the grid, spanning 4 columns and 2 rows.

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



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

The diagram shows a large grid of 20 columns and 10 rows. On the left side, a rounded rectangular box contains the text "Show your method". On the right side of the grid, there is a smaller rectangular box that is 4 units wide and 2 units high, with the text "cm" inside it.

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





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