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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Instructions

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

Questions and answers

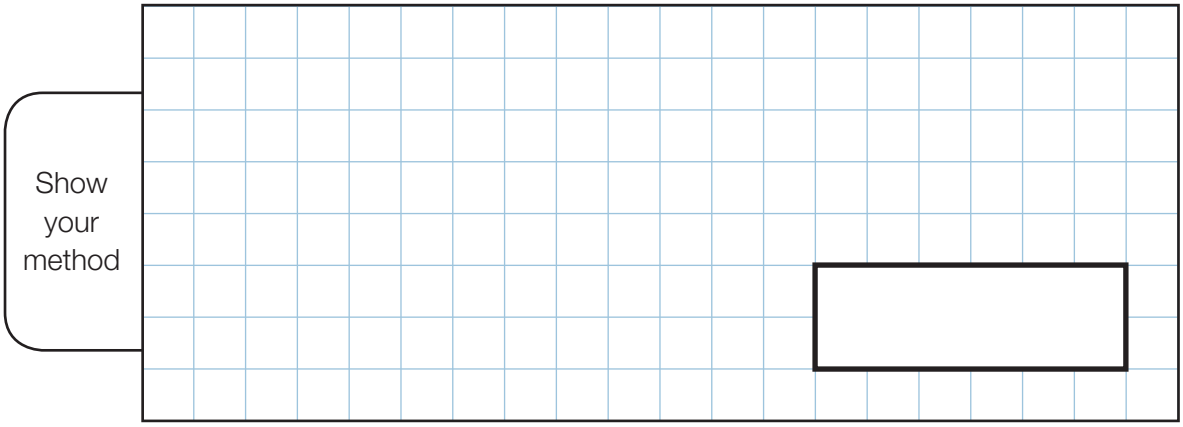
You have **35 minutes** to complete this test.

Follow the instructions for each question.

Work as quickly and as carefully as you can.

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.

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1 Here are four numbers.

13,562	Thirty thousand, two hundred and four	4,045	13,302

Which is the greatest number?

_____

1 mark

Which number rounds to 13,000 to the nearest 1,000?

_____

1 mark

2 Complete the missing numbers.

400 + ☐ + 7 = 427

400 + ☐ + 17 = 427

300 + ☐ + 7 = 427

2 marks

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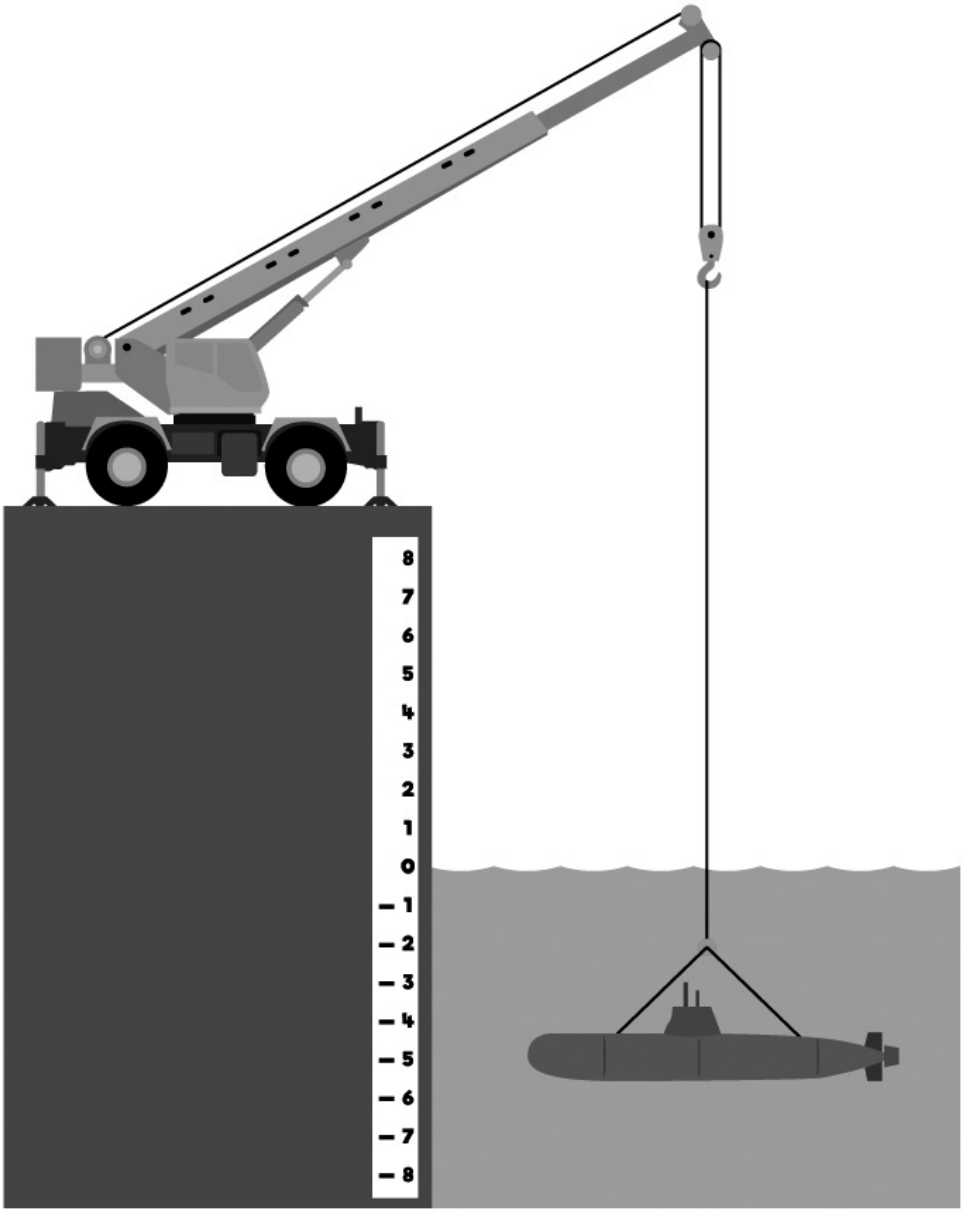
3 A submarine is 5 metres below sea level.

A crane lifts the submarine 8 metres upwards.



How far above sea level is the submarine now?

m

1 mark

4 6 friends share some pound coins equally.

They each receive 3 pound coins.

There are 2 pound coins left over.

How much money did they share?

£

1 mark

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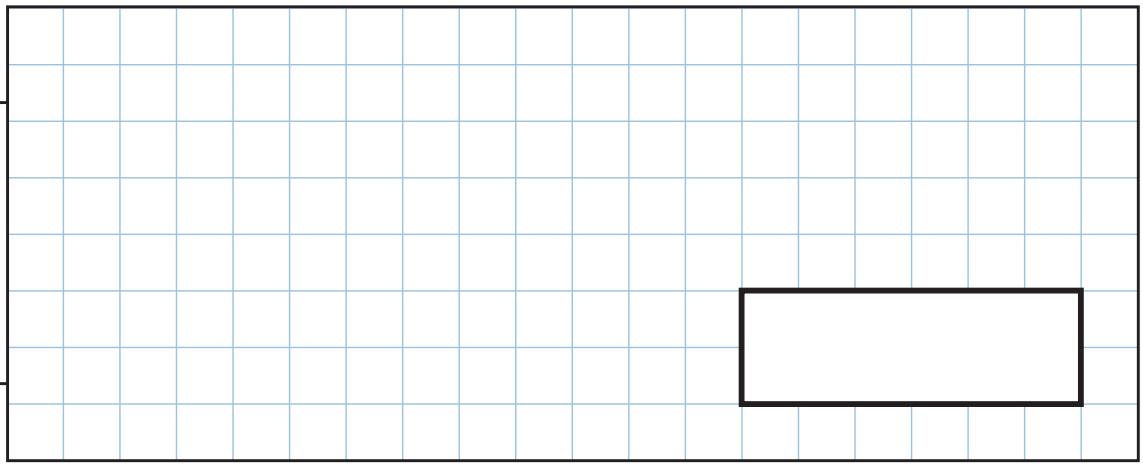
5 Here are the capacities of three football stadiums.

Football stadium	Capacity
Huddersfield Town	24,500
Leeds United	37,366
Halifax Town	14,061

What is the total capacity of all three stadiums?

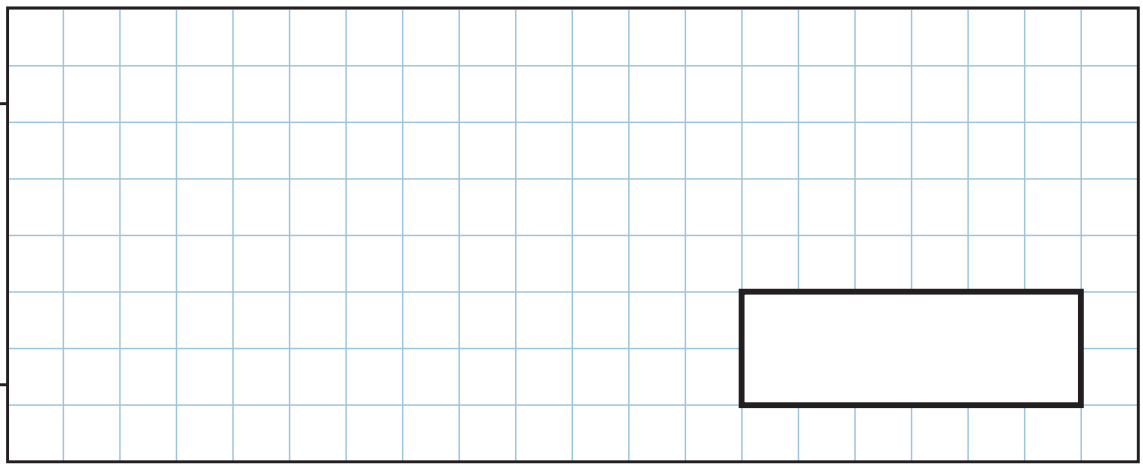
Show your method



1 mark

What is the difference between the capacity of Huddersfield Town and Halifax Town?

Show your method



1 mark

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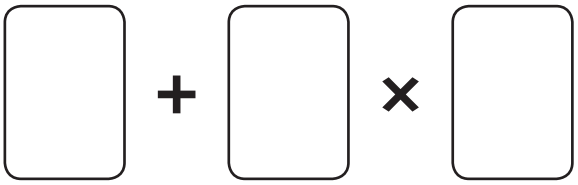
6 Louisa uses these digit cards to complete a calculation.

Her answer is a multiple of 3 but not a multiple of 6

Complete Louisa's calculation.



What is the answer to Louisa's calculation?

2 marks

7 Five lollipops cost the same as three chocolate bars.

One chocolate bar costs 85p.

How much does one lollipop cost?

2 marks

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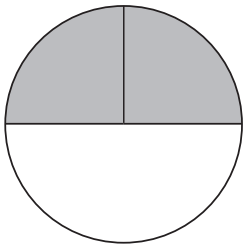
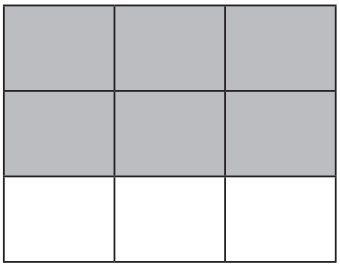
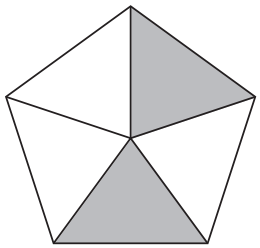
8 Tick the shapes that show $\frac{2}{3}$ shaded.







1 mark

Complete the boxes to make the fractions equivalent.

$$\frac{3}{4} = \frac{\square}{12} = \frac{36}{\square}$$

1 mark

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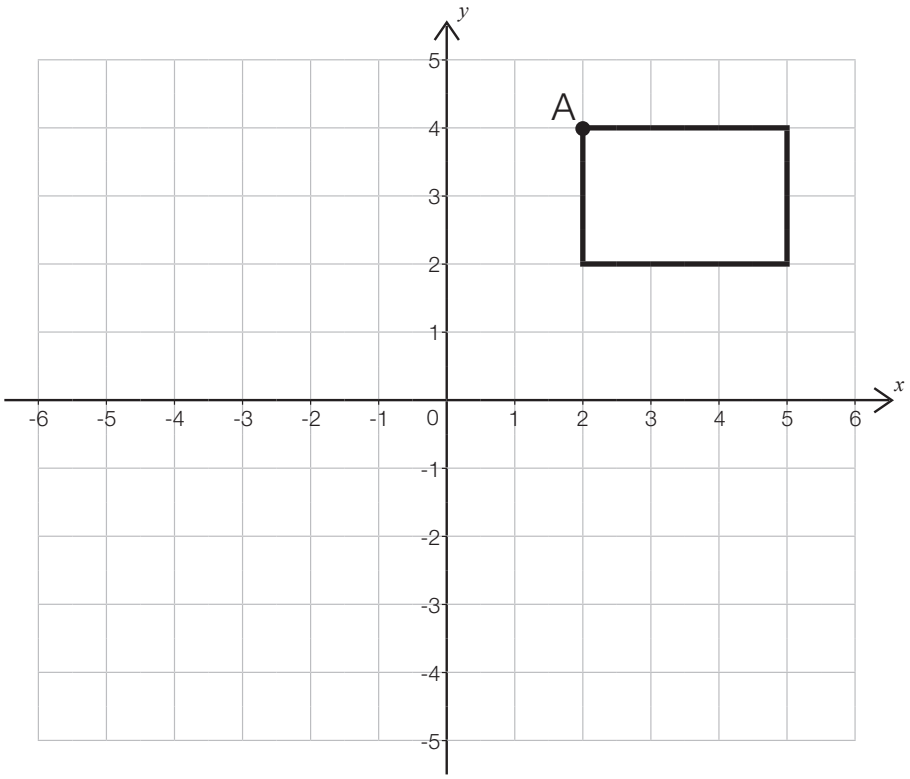
9 Here is a rectangle on a co-ordinate grid.



What are the co-ordinates of vertex A?

(,)

1 mark

Translate the rectangle, 4 left and 7 down.

Draw the new rectangle.

1 mark

Write the co-ordinates of the vertices of the new rectangle.

(,) (,) (,) (,)

1 mark

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10 Show that

$$\frac{1}{3} + \frac{1}{4} > \frac{1}{3} \times \frac{1}{4}$$

Show your method

1 mark

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

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

Explain your reasoning.

1 mark

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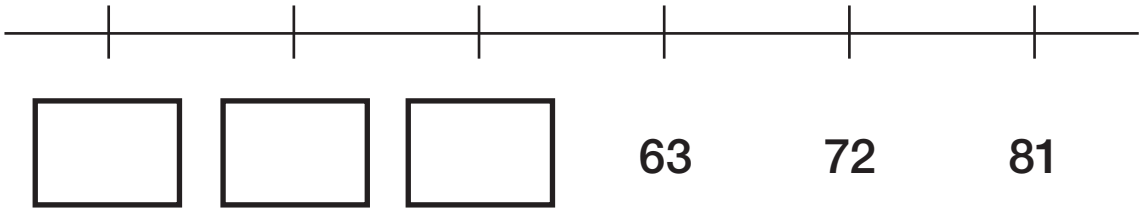
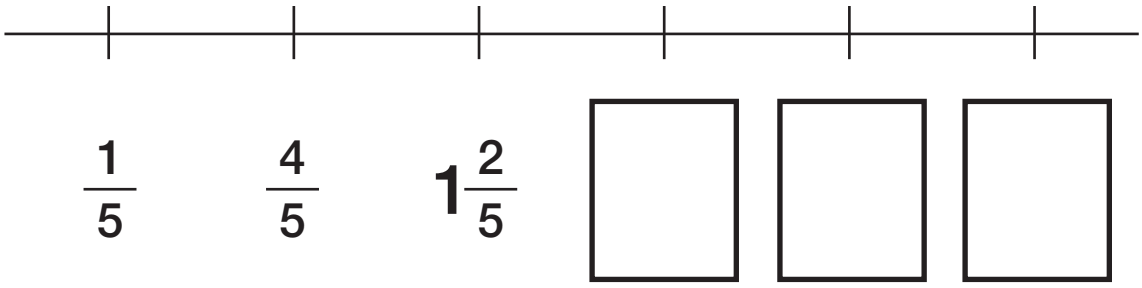
11 Complete the number lines.



1 mark



1 mark

12 A pile of 15 identical books is 1,860 millimetres tall.

Sami takes $\frac{1}{3}$ of the books off the pile.

How tall is the pile of books now?

Show your method

mm

2 marks

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13 P and Q are different one-digit **prime** numbers.

R is a **square** number.

Find values for P, Q and R.

P = ☐ Q = ☐ R = ☐

2 marks

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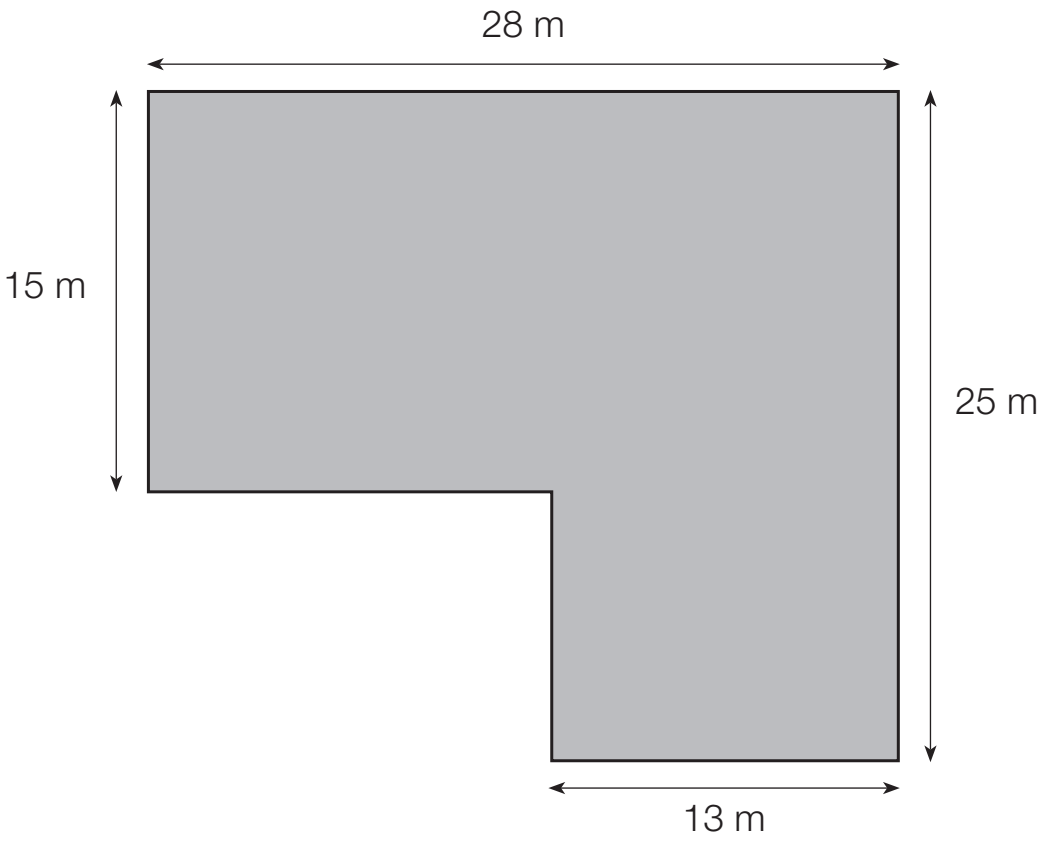
14 The diagram shows a field.



5 sheep need 350 m^2 of field.

Is the field big enough for 10 sheep?

Yes **No**

You must show all your working out.

3 marks

15 Jenny has a bottle of juice.

Each day, Jenny uses 30 ml of juice.

After 3 days, Jenny has $\frac{4}{5}$ of the juice left.

How much juice was in the bottle to begin with?

Show your method

ml

2 marks

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