Spring 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

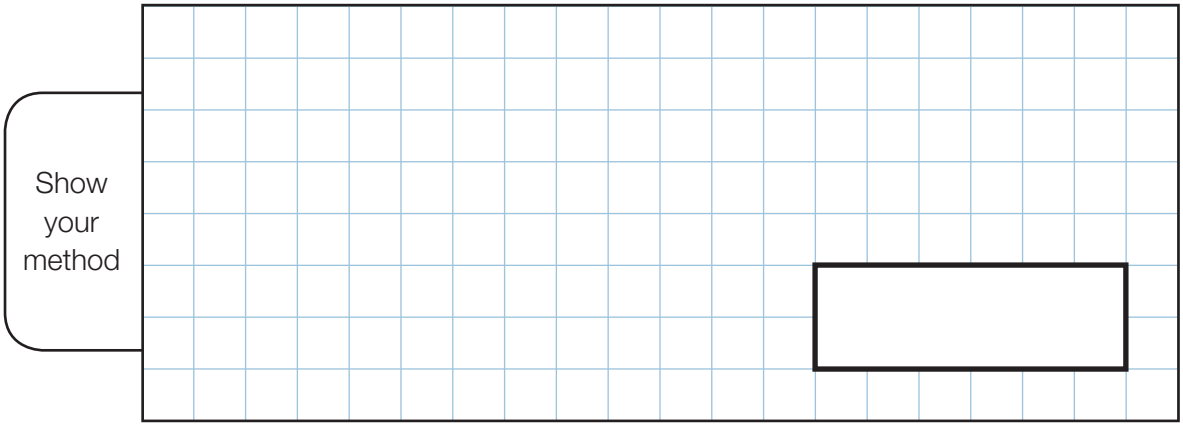
You have **40 minutes** to complete this test.

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.

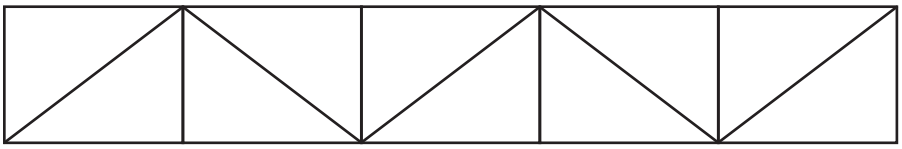
If you finish before the end, **go back and check your work**.

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 Shade $\frac{1}{10}$ of the shape.



1 mark

Circle the number which is equivalent to $\frac{1}{10}$

0.1 **0.01** **1** **10**

1 mark

Complete the sequence.

$\frac{73}{100}$, $\frac{75}{100}$, $\frac{77}{100}$, ____, ____, ____

1 mark

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2 Sophie makes a number on a place value grid.

Thousands	Hundreds	Tens	Ones
1000 1000 1000 1000		10 10	1 1 1

What is Sophie's number?

1 mark

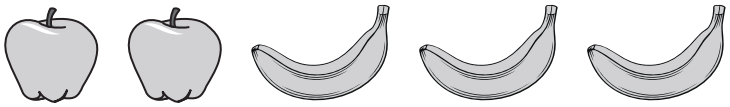
Sophie adds 40 to her number.

What is her new number?

1 mark

3 Class 6 have some fruit.

For every 2 apples, they have 3 bananas.



They have 10 apples.

How many bananas do they have?

bananas

1 mark

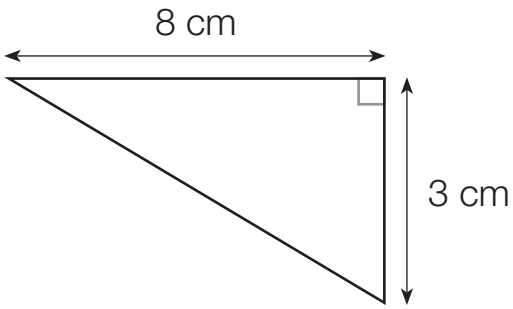
4 The numbers in the sequence increase by the same amount each time.

Complete the missing numbers.

	2		12	17	22

2 marks

5 Calculate the area of the triangle.



$\square$ **cm²**

1 mark

6 Four children take part in a throwing event.

Their distances are recorded in the table.

Name	Distance (metres)
Jake	13.54
Briony	21.54
Rehan	20.69
Tom	18.21

What is the difference between the longest throw and the shortest throw?

Show your method

m

1 mark

Write down the name of the child whose distance rounds to 21 metres to the nearest metre.

1 mark

7 Laura thinks of a number.

She multiplies her number by 2 and then subtracts 6

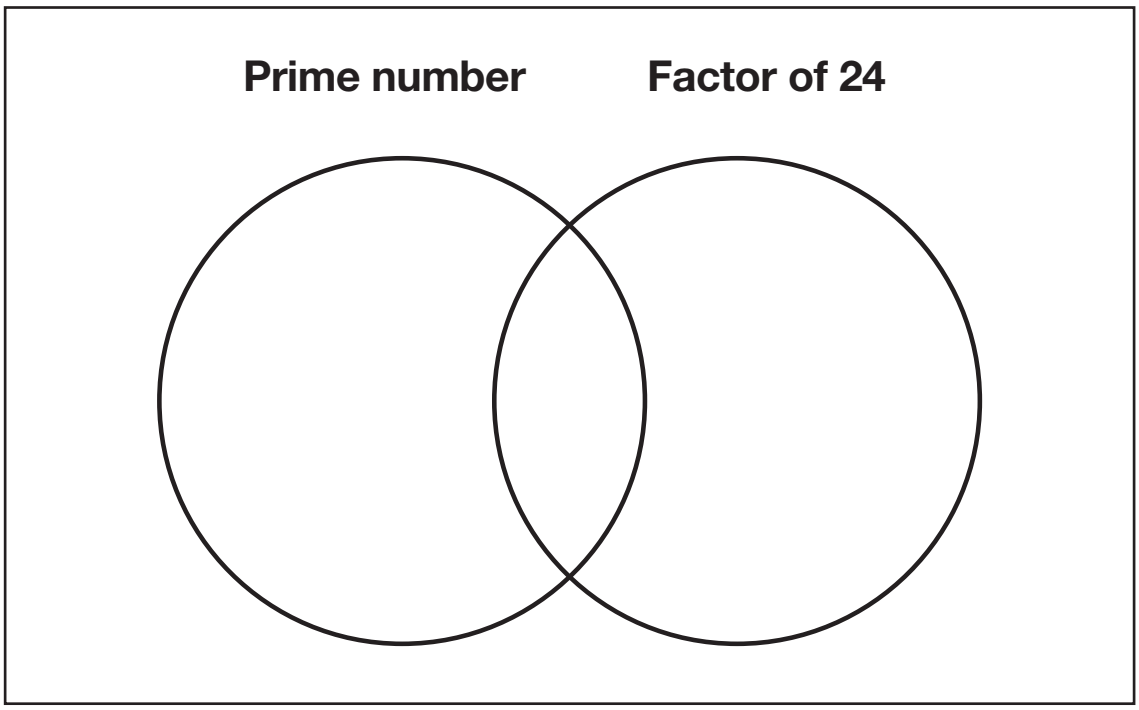
Her answer is 4

What number was Laura thinking of at first?

1 mark

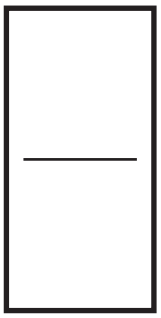
8 Write each number in its correct place on the diagram.

2 **24** **48** **12** **13**



2 marks

9 Write 0.25 as a fraction.



1 mark

Amy says that 0.75 is smaller than $\frac{7}{8}$

Explain why Amy is correct.

1 mark

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10 The mass of a box containing 6 tins of beans is 7.5 kg.



When 2 tins of beans are removed, the mass of the box is 5.1 kg.

What is the mass of one tin of beans?

Show your method

kg

1 mark

What is the mass of the empty box?

Show your method

kg

2 marks

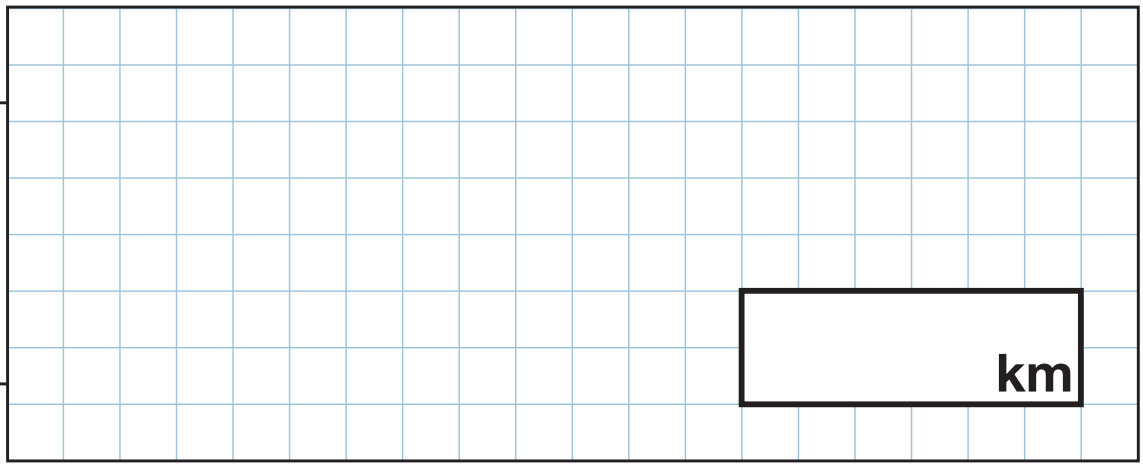
11 Martin is running in a race.

He runs $\frac{2}{3}$ of the total distance of the race.

He has 18 km left to run.

What is the total distance of the race?

Show your method



2 marks

12 Here are the ingredients needed to make **8 pancakes**.

Ingredients
Sugar ..... 150 g
Butter ..... 275 g
Eggs..... 2
Flour ..... 400 g

How much more flour is used than sugar?

Show your method

g

1 mark

How much butter is needed for 24 pancakes?

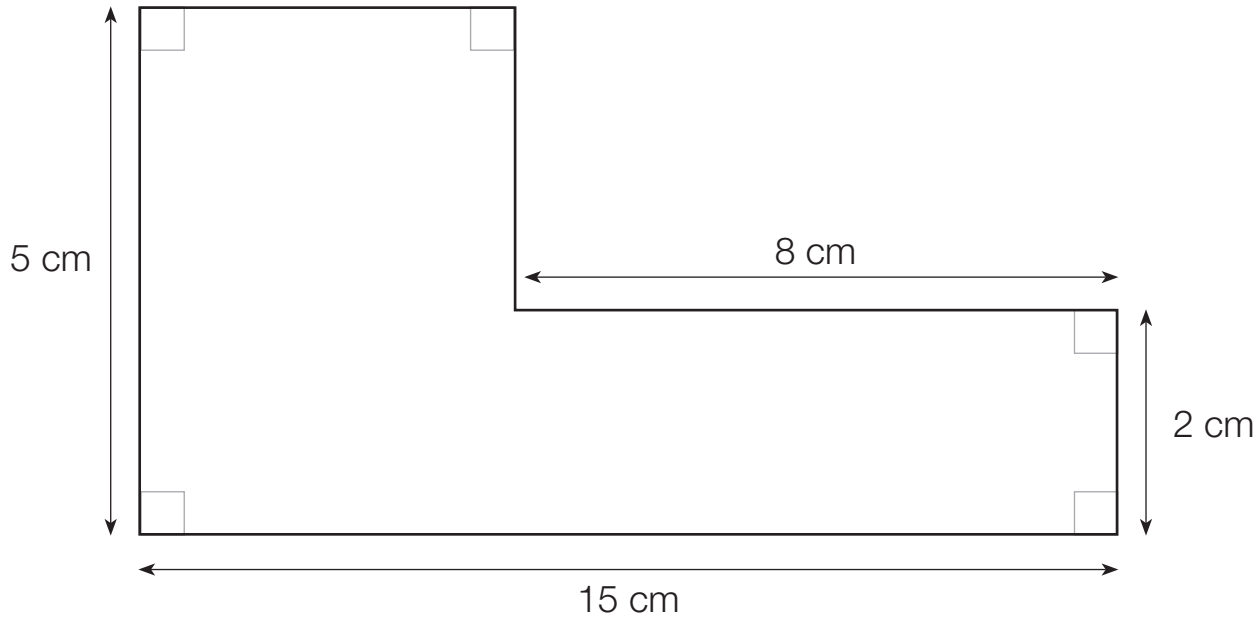
Show your method

g

2 marks

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13 Calculate the area of the shape.



Show your method

cm²

2 marks

14 Given that $n = 20$, what is the value of $3n + 2$?

1 mark

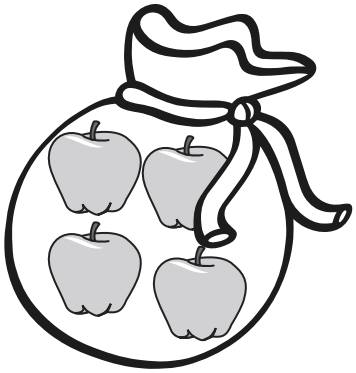
$4p + 2 = 14$

What is the value of p?

$p =$

1 mark

15 A shop sells single apples and bags of 4 apples.



Bag of 4 apples

£1.32



Single apple

40p

How much cheaper is it to buy 12 apples in bags rather than 12 single apples?

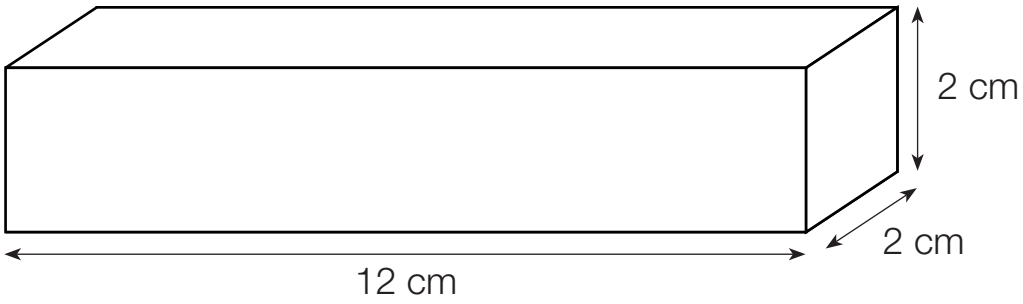
Show your method

p

2 marks

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16 Calculate the volume of the cuboid.



cm³

1 mark

17 What is $\frac{3}{4}$ of 5 km?

Give your answer in metres.

Show your method

m

2 marks

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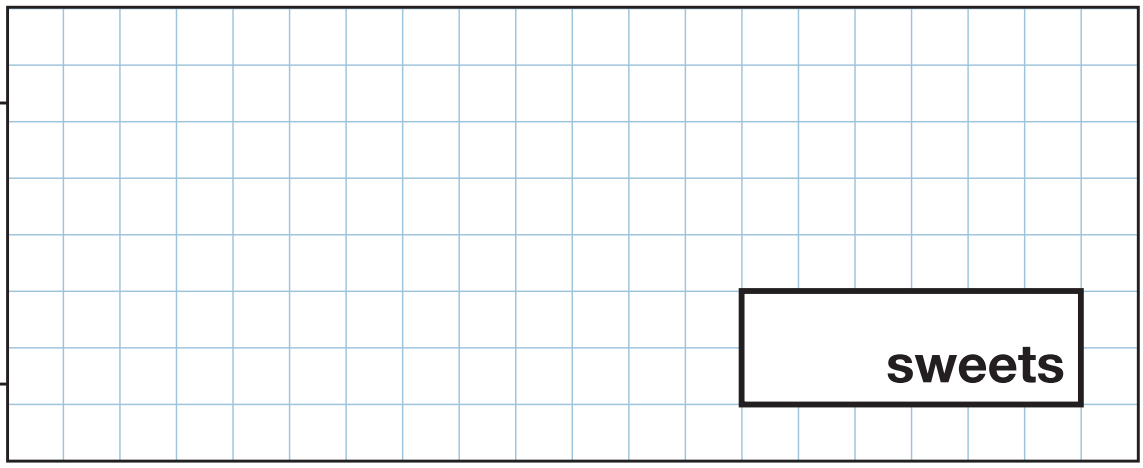
18 Bilal and Charlie have some sweets.

Bilal has 4 times as many sweets as Charlie.

Bilal gives Charlie 15 of his sweets and now they have the same amount.

How many sweets do they have altogether?

Show your method



2 marks

END OF TEST

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