

Progress check

Year 6

Mathematics

Paper 2: reasoning and problem solving

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

Published Autumn 2015

These assessments have been designed by the White Rose Maths Hub.
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.

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

Jack has the following number

540392

He adds five thousands to his number.

What is his new number?

1 mark

2

Put the **same** number in each box to make the statement correct.

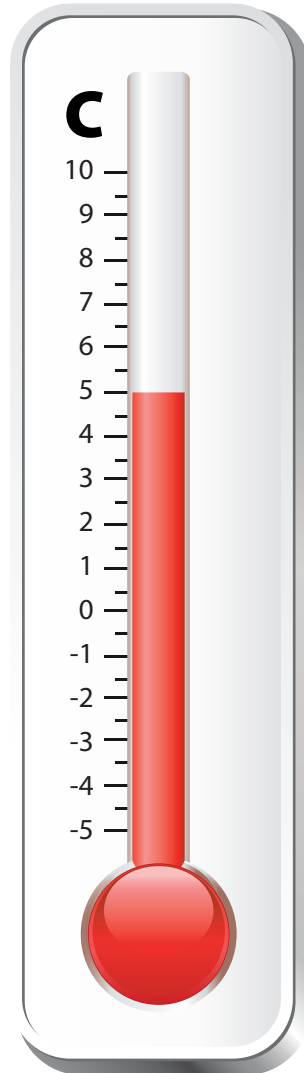
$$7 \square 4 < 74 \square$$

1 mark

5

Nikolas is finding the difference in temperature between midday and midnight.

The thermometer shows the temperature at midday.



At midnight it is 7°C colder.

What is the temperature at midnight?

1 mark

6

Complete the sequences.

$$\frac{1}{2}, \frac{1}{4}, \frac{1}{8}, \boxed{}, \boxed{}$$

$$\frac{2}{5}, \frac{4}{5}, \boxed{}, \boxed{}, 2$$

2 marks

7

Each box represents the **same** number.

Use this number to fill in the boxes.

$$\begin{array}{r}
 14\boxed{}5 \\
 \times \quad 2\boxed{} \\
 \hline
 4\boxed{}05 \\
 28700 \\
 \hline
 \boxed{}\boxed{}005
 \end{array}$$

1 mark

8

Here are some facts.

$$A + \frac{2}{7} = 1$$

$$1 - B = \frac{6}{7}$$

$$A + B + C = 1$$

Calculate the value of C.

Show
your
method

C =

1 mark

9

Fran is finding the lowest common multiple of 6 and 9

“The answer is 54 because to find the lowest common multiple of any two numbers you multiply them together.”



Is Fran correct?

Circle your answer

Yes

No

Explain your choice.

1 mark

$$168 \times 8 \quad \square \quad 168 \times 7$$

$$168 \div 8 \quad \square \quad 168 \div 7$$

$$168 + 8 \quad \square \quad 168 - 7$$

2 marks

Find the missing values.

$$\frac{3}{\boxed{}} = \frac{6}{10}$$

$$\frac{25}{30} = \frac{5}{\boxed{}}$$

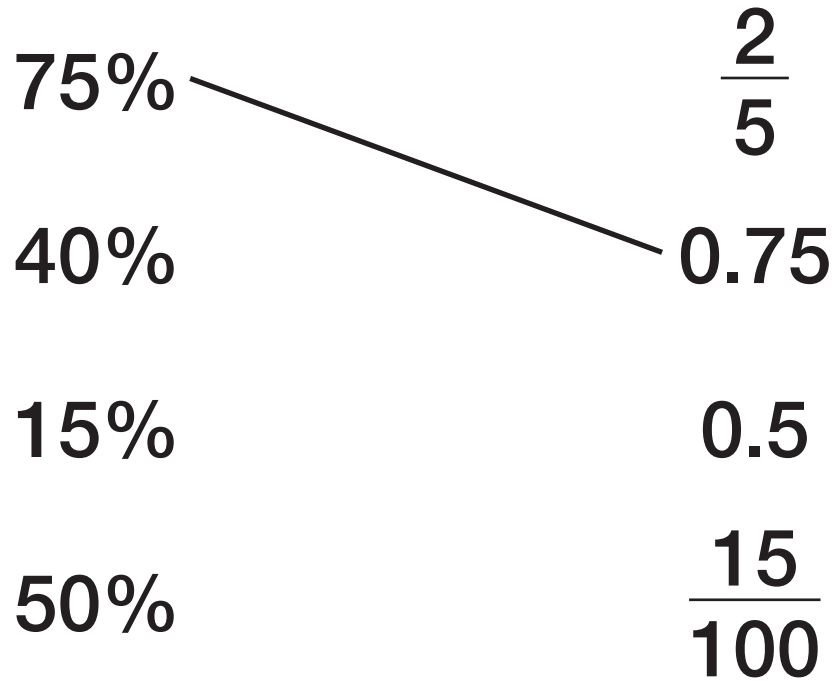
$$\frac{2}{3} = \frac{2 + 6}{3 + \boxed{}}$$

2 marks

13

Match each percentage to the correct equivalent.

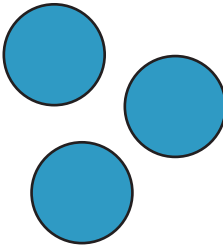
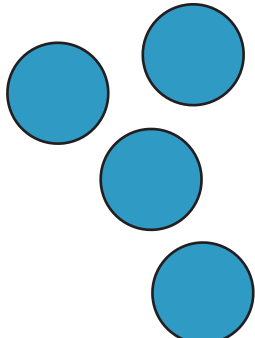
The first one has been done for you.



2 marks

14Sara uses counters to represent the decimal equivalent to $\frac{3}{8}$

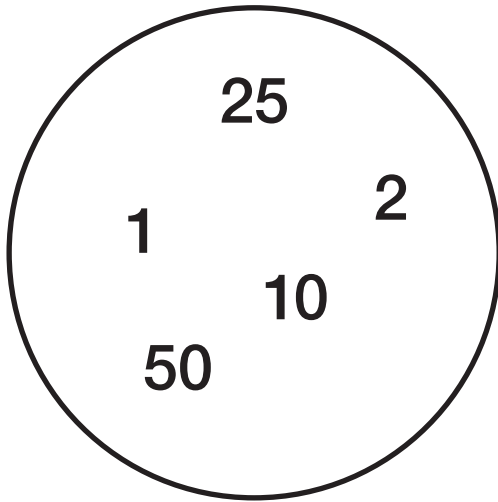
Complete the grid to show her number.

Ones	Tenths	Hundredths	Thousandths
	 <p>Three blue circular counters are placed in the Tenths column. One counter is at the top, one is in the middle, and one is at the bottom.</p>		 <p>Four blue circular counters are placed in the Thousandths column. Two are at the top, one is in the middle, and one is at the bottom.</p>

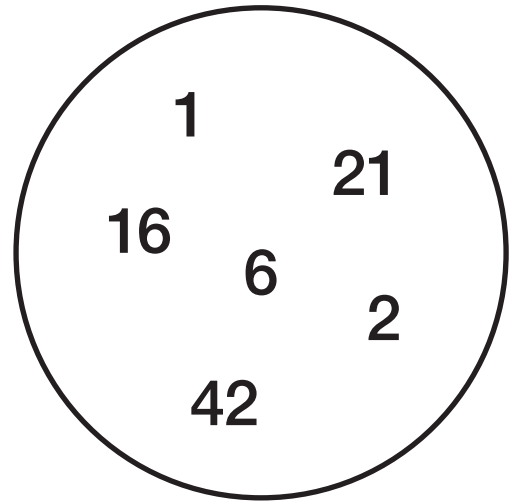
2 marks

Zac is sorting numbers into groups.

Factors of 100



Factors of 84



One of the numbers is incorrect.

Circle this number.

1 mark

Some factors are missing from each group.

Find the **common** factor that is missing?

1 mark

16

796 eggs are put into boxes.

Each box holds 6 eggs.

How many boxes are needed?

Show
your
method

boxes

2 marks

17

Ben says,

“All prime numbers are odd”



Do you agree?

Yes

No

Explain your answer.

1 mark

18

Here are four fraction cards.

$$\frac{7}{12}$$

$$1\frac{1}{3}$$

$$1\frac{5}{6}$$

$$\frac{3}{4}$$

Find the **difference** between the smallest and largest fraction.

Show
your
method

A large grid for showing the method to find the difference between the smallest and largest fraction. A small empty rectangular box is provided for the final answer.

2 marks

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