# Summer Progress Check

## Year 6

### Mathematics

**Paper 2: reasoning and problem solving**

<table>
<thead>
<tr>
<th>First name</th>
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<tbody>
<tr>
<td>Middle name</td>
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<tr>
<td>Last name</td>
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<tr>
<td>Date of birth</td>
<td>Day</td>
</tr>
<tr>
<td>Teacher</td>
<td></td>
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</tbody>
</table>

These assessments have been designed by White Rose Maths. For more information, please visit [www.whiterosemaths.com](http://www.whiterosemaths.com)
You **may not** use a calculator to answer any questions in this test.

**Questions and answers**
You have **50 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.
1. 67 children attend chess club.
   26 different children attend maths club.
   Nobody attends both clubs.
   There are 600 children in the school.
   How many children do not attend either club?

2. Match the numbers to their word form.
   One has been done for you.

<table>
<thead>
<tr>
<th>Number</th>
<th>Word Form</th>
</tr>
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<tbody>
<tr>
<td>19,300</td>
<td>One thousand, nine hundred and thirty</td>
</tr>
<tr>
<td>1,930</td>
<td>One hundred and nine</td>
</tr>
<tr>
<td>1,090</td>
<td>Nineteen thousand, three hundred</td>
</tr>
<tr>
<td>190</td>
<td>One hundred and ninety</td>
</tr>
<tr>
<td>109</td>
<td>One thousand and ninety</td>
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</tbody>
</table>
Max lives at this house.

XXIV

What number house does Max live at?

1 mark
In a fruit bowl, there are 2 apples for every 5 bananas.

There are 8 apples in the fruit bowl.

How many pieces of fruit are there in the fruit bowl in total?
What time is shown on the clock?

Circle all the possible answers.

08:55  07:55  08:11  19:55

John leaves his house at 13:56
His walk to school takes 35 minutes.
What time does John arrive at school?

Show your method:
What is 10 more than $4\frac{2}{3}$?

How many thirds are there in $4\frac{2}{3}$?

Filip says there are double the amount of sixths than thirds in $4\frac{2}{3}$?

Is Filip correct?

Explain your answer.
A soft toy costs £4.50

A suitcase costs ten times as much.

How much does the soft toy and suitcase cost in total?

£
Use a ruler to complete this line graph.

<table>
<thead>
<tr>
<th>Time</th>
<th>Temperature (°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>09:00</td>
<td>10</td>
</tr>
<tr>
<td>09:30</td>
<td>12</td>
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<tr>
<td>10:00</td>
<td>14</td>
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<td>14</td>
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<td>11:00</td>
<td>16</td>
</tr>
<tr>
<td>11:30</td>
<td>17</td>
</tr>
<tr>
<td>12:00</td>
<td>18</td>
</tr>
</tbody>
</table>
Morgan is running a 10 kilometre race.

So far, she has run 1,340 metres.

How far does she have left to run?
Triangle P is reflected in the \(x\)-axis

Draw the reflection on the grid.

Label your shape Q.

Triangle P is now translated 7 units right and 3 units up.

What are the co-ordinates of the vertex labelled A after the translation?

\((\text{ }, \text{ })\)
Shade \( \frac{2}{3} \) of the shape below.

Sam says,

“20% of the shape is shaded.”

Do you agree with Sam?

Explain your answer.
A is half way between 0.1 and 0.4

What is the value of A?

What is the value of B?
Complete the missing number.

\[ \_
\]

\[ \frac{6}{\_
}\text{ of } 132 = 88 \]

Explain all the steps in your working.

1 mark
A bottled drink is made up of 120 ml of juice and the rest is water. Water makes up \( \frac{3}{5} \) of the drink.

How much water would be needed for 6 bottles of drink?
The shape below is made of an isosceles triangle, a scalene triangle and a right-angled triangle.

Calculate the size of angle a.
Ajay has these four digit cards.

2 5 0 7

What is the mean of Ajay’s cards?

Ajay removes one of the cards.

The mean of the new cards is 4

Which card did he remove?

Explain your answer.
17 Calculate the volume of the cuboid.

Show your method

18 \[2y + 3x = 12\]

If \(x = 2\), find the value of \(y\)

\[y = \]
Draw a pair of brackets to make the number sentence true.

\[8 + 4 \times 3 - 2 + 1 = 13\]
2 books and 3 magazines cost £17
2 books and 5 magazines cost £21

How much does a magazine cost?

Show your method

How much does a book cost?

Show your method
Sam buys 20 metres of fabric.

He uses $\frac{3}{10}$ of it to make a dress.

He uses $2\frac{1}{3}$ metres to make some trousers.

How many metres does he have left?
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Please do not write on this page.