Mathematics tests

Test A

Calculator not allowed

First name
Middle name
Last name
Date of birth
School name
DfE number

For marker's use only

<table>
<thead>
<tr>
<th>Page</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
</tr>
</tbody>
</table>
These three children appear in some of the questions in this test.

Alfie  
Chen  
Megan
Instructions

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

Work as quickly and as carefully as you can.

You have **45 minutes** for this test.

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**.

Follow the instructions for each question carefully.

This shows where you need to put the answer.

If you need to do working out, you can use any space on a page.

Some questions have an answer box like this:

For these questions you may get a mark for showing your working.
The numbers in the two triangles add up to the number in the square.

Using the **same** rule, write in the missing numbers.
Draw the reflection of all the shaded shapes in the mirror line.
Circle the number that is closest to 300

338  3030  288  313  130

The number 20 goes in **two** of the squares of this multiplication grid.

Tick (✓) the two squares where 20 goes.
Here are three nets of a cube.

On each net draw **one more dot** so that each cube will have dots on **opposite** faces.
This diagram shows how nine people travel to work and how far away they live.

Key:
- ☒ walk
- ▲ bus
- ● cycle

How many people live more than 4km from work?

How far from work does person G live?

Write the letter of the person who lives 2km from work and cycles.
Megan and Chen are washing cars.

Megan gets £39 and Chen gets £55

They share what they get equally between them.

How much does each of them get?
The table shows the cost of a new football kit.

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shirt</td>
<td>£8.75</td>
</tr>
<tr>
<td>Shorts (1 pair)</td>
<td>£5.95</td>
</tr>
<tr>
<td>Socks (1 pair)</td>
<td>£4.15</td>
</tr>
</tbody>
</table>

Altogether, how much does the complete football kit cost?  

£ 

Here are some sentences about an amount of money.

Mark each sentence with a tick (✓) if it is correct. Put a cross (✗) if it is not correct.

One has been done for you.

£1.03 can be made with exactly 1 coin.  

£1.03 can be made with exactly 2 coins.  

£1.03 can be made with exactly 3 coins.  

£1.03 can be made with exactly 4 coins.
Here are four designs made from two sizes of circles.

Write the letters of all the designs that have line symmetry.
Write in the missing numbers.

<table>
<thead>
<tr>
<th>Number</th>
<th>Rounded to the nearest whole number</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.05</td>
<td></td>
</tr>
<tr>
<td>5.55</td>
<td></td>
</tr>
<tr>
<td>4.45</td>
<td></td>
</tr>
<tr>
<td>4.54</td>
<td></td>
</tr>
</tbody>
</table>

15 \times 100 = \underline{1500}

\underline{150} \times 10 = 1500

\underline{150} \div 100 = 150
Alfie places three cubes on a coordinate grid. The base of his shape is a rectangle.

Complete this sentence:

The four **vertices** of the rectangle are

(2, 3), (5, 3), (5, 4) and

( , )
Tick (√) each shape that is exactly $\frac{1}{4}$ shaded.
Four children are in a race.

Chen is 2 metres ahead of Alfie.

Nina is 5 metres behind Megan.

Alfie is 3 metres behind Megan.

Write the names of the runners in order, starting with the child who is furthest ahead.

Alfie buys two books, each at the same price.

He pays with a £10 note and gets £2.30 change.

What is the cost of one book?

Show your working

Total out of 4
This graph shows the distance Alfie and Chen walked in an afternoon. They started at 1:45pm and had two breaks.

How many kilometres did they walk *between* the first and second breaks?

At what time did Alfie and Chen start their second break?
Here is a spinner.

Write a whole number in each section of the spinner so that it is certain you will get a number less than 4 and it is impossible you will get an even number.

Calculate $816 \div 24$

Show your working

Total out of 5
Chen and Megan each have a parcel.

Chen’s parcel weighs $1\frac{1}{2}$ kg.

Megan’s parcel weighs 1.2 kg.

How many more grams does Chen’s parcel weigh than Megan’s parcel?

Show your working.

grams
21. 20% of Megan’s number is 64

What is 50% of Megan’s number?

Show your working

22. Write these in order of size, starting with the smallest.

\[
\frac{2}{3}, \quad 0.5, \quad \frac{3}{5}, \quad 0.65
\]

smallest

Total out of 5 ___
Alfie has some rectangles.

He makes this shape using three of the rectangles.

What is the **perimeter** of Alfie’s shape?
A cake costs 15p more than a biscuit.

Megan bought a cake and two biscuits for 90p.

How much do a cake and a biscuit each cost?
Chen and Megan each have a set of numbered counters.

They each take one of their own counters without looking.

Chen says,

‘I am more likely than Megan to get a 4’

Is Chen correct? Circle Yes or No.

Yes / No

Explain how you know.