Mathematics test

Test B

Calculator allowed

First name __________________________

Last name __________________________

School __________________________

For marker's use only

<table>
<thead>
<tr>
<th>Page</th>
<th>Marks</th>
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<td>23</td>
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<td>TOTAL</td>
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</table>
Emily

Nisha

Ben
You **may** 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:

Show your **method**. You may get a mark.

For these questions you may get a mark for showing your method.
Join each number to the set of numbers that it belongs to.

One has been done for you.

357
1 to 100
101 to 200
199
201 to 300
73
301 to 400
1000
401 to 500
224
greater than 500
Here is a diagram for sorting shapes.

One of the shapes is in the wrong place. Put a cross (\(\times\)) on it.
Here are two clock faces.

Join each clock face to the correct digital time.
Ben buys three bottles of milk and six cakes.

How much does he spend altogether?

Show your method. You may get a mark.
Here are some nets of shapes.

For each net, put a tick (✓) if it folds to make a pyramid. Put a cross (✗) if it does not.
This chart shows the number of cars in a car park at different times on one day.

There are 80 cars in the car park when it is full.

How many **empty spaces** were there in the car park at 3pm?

Circle **all** the times when the car park was less than half full.

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<tr>
<td>10 am</td>
<td>11 am</td>
<td>12 noon</td>
<td>1 pm</td>
<td>2 pm</td>
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</table>

6a 1 mark

6b 1 mark

Total out of 3
Emily has these coins.

How much more money does Emily need to make exactly £5?

£

1 mark

Nisha has thirty 5p coins and twenty 10p coins.

How much money does she have altogether?

£

1 mark
Nisha says,

'When you halve any even number, the answer is always an odd number'.

Is she correct?
Circle **Yes** or **No**.

Explain how you know.
Here are four labels.

- even
- multiples of 9
- not even
- not multiples of 9

Write each label in the correct position on the sorting diagram below.

Shade \( \frac{1}{5} \) of this shape.
Ben makes this design on a grid.

He rotates the grid to a new position.

Shade in the missing parts of the design.
Here are five digit cards.

1 3 4 6 9

Use each card **once** to complete the statements below.

\[
\begin{array}{c}
8 > \_
\end{array}
\]

\[
\begin{array}{c}
0 < \_
\end{array}
\]

\[
\begin{array}{c}
\_ > 7
\end{array}
\]

Draw **two** more circles on this grid to make a design that has a line of symmetry.
Emily chooses two numbers.

She adds the two numbers together and divides the result by 2.

Her answer is 44.

One of Emily’s numbers is 12.

What is Emily’s other number?

Show your method. You may get a mark.

14

Total out of 5
40 children each chose their favourite flavour of yogurt.

This chart shows the results.

How many children chose lemon yogurt?

How many more children chose raspberry than plain yogurt?
Emily, Ben and Nisha take part in a sponsored swim to collect money for charity.

Emily collects £2.75 more than Nisha.

Ben collects £15

Nisha collects £7 less than Ben.

Altogether how much money do the three children collect?

Show your method. You may get a mark.
This scale shows the dates of floods and the height of the water in the floods.

<table>
<thead>
<tr>
<th>Height of water (metres)</th>
<th>Year of flood</th>
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<tr>
<td>3</td>
<td>1969</td>
</tr>
<tr>
<td>2</td>
<td>1955</td>
</tr>
<tr>
<td>1</td>
<td>1977</td>
</tr>
<tr>
<td>0.5</td>
<td>1948</td>
</tr>
<tr>
<td>0</td>
<td>2001</td>
</tr>
</tbody>
</table>

How high was the water in the 1955 flood?

How much higher was the water in the 1969 flood than in the 1948 flood?
Emily has £5 to spend on peaches.

She decides to buy only small peaches or only large peaches.

How many more small peaches than large peaches can she buy for £5?

Show your method. You may get a mark.

How much less than 1000 is \(9.7 \times 9.8 \times 9.9\)?

1 mark

Total out of 5
Here are two spinners, P and Q.

Spinner P has 4 equal sections.
Spinner Q has 6 equal sections.

Ben spins the pointer on each spinner.

For each statement below, put a tick (✓) if it is correct. Put a cross (✗) if it is not correct.

Ben is more likely to score 4 on spinner P than on spinner Q.

The score on spinner P is certain to be less than the score on spinner Q.

Ben is equally likely to score an even number on spinner P and spinner Q.

A score of less than 3 is equally likely on spinner P and spinner Q.
Here is a regular octagon with two vertices joined to make the line AB.

Join two other vertices to draw **one** line that is **parallel** to the line AB.

Here is the octagon again.

Join two vertices to draw **one** line that is **perpendicular** to the line AB.
22. Find the multiple of 45 that is closest to 8000.

Show your **method**. You may get a mark.

23. **m** stands for a whole number greater than 10 and less than 20.

   **n** stands for a whole number greater than 2 and less than 10.

   What is the **smallest** number that **m** \(\times\) **n** could be?

   What is the **largest** number that **m** – **n** could be?
The perimeter of a square is 72 centimetres.

The square is cut in half to make two identical rectangles.

What is the perimeter of one rectangle?

Show your method. You may get a mark.