Mathematics test

Paper 1

Calculator not allowed

First name ________________________________________________

Last name ________________________________________________

School __________________________________________________

Remember

■ The test is 45 minutes long.
■ You must not use a calculator for any question in this test.
■ You will need: pen, pencil, rubber and a ruler.
■ This test starts with easier questions.
■ Try to answer all the questions.
■ Write all your answers and working on the test paper – do not use any rough paper. Marks may be awarded for working.
■ Check your work carefully.
■ Ask your teacher if you are not sure what to do.
Instructions

Answers
This means write down your answer or show your working and write down your answer.

Calculators
You must not use a calculator to answer any question in this test.
Look at the information about recycling places in one town.

<table>
<thead>
<tr>
<th>Recycling place</th>
<th>Glass</th>
<th>Cans</th>
<th>Plastic</th>
<th>Paper</th>
<th>Clothes</th>
<th>Shoes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supermarket A</td>
<td>✔</td>
<td>✔</td>
<td></td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Supermarket B</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supermarket C</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td></td>
<td></td>
<td>✔</td>
</tr>
<tr>
<td>Car park D</td>
<td>✔</td>
<td></td>
<td>✔</td>
<td>✔</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Car park E</td>
<td>✔</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Road F</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(a) How many of these places recycle **paper**?

(b) One of these places recycles **plastic**.

Which place is this?

(c) Molly wants to go to **one** of the places to recycle **cans and clothes**.

Which place should she go to?
Here are three numbers.

(a) What is the **sum** of the three numbers?

(b) What is the **difference** between the **largest** number and the **smallest** number?

(c) Write a calculation using **all three numbers** that gives the **answer 10**
(a) Jack buys four apples. He pays with a £2 coin. He gets £1.20 change. How much does one apple cost?

(b) Oranges cost 15p each. Raj has a £1 coin. What is the greatest number of oranges Raj can buy with £1?
4
Look at this number sequence.
Write the missing numbers in the boxes.

2 9 16 23

Molly wants to decorate some cakes.
Each cake will have 3 cherries.

Molly has 48 cherries.
How many cakes can she decorate?
Calculate the following.

347 + 62 =

154 – 81 =

74 × 5 =

378 ÷ 3 =

1 mark

1 mark

1 mark

1 mark
Look at these statements about *rectangles*.

For each statement, tick (✓) True or False.

The first one is done for you.

<table>
<thead>
<tr>
<th>Statement</th>
<th>True</th>
<th>False</th>
</tr>
</thead>
<tbody>
<tr>
<td>All rectangles have four sides.</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>All rectangles have four equal sides.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some rectangles have no right angles.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All rectangles have at least one line of symmetry.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
8. (a) $32 + 47$ is **bigger** than $32 + 43$

How much bigger?

(b) $7 \times 9$ is **bigger** than $6 \times 9$

How much bigger?

9. Write the missing numbers.

\[ \_ \_ \_ \_ \_ \_ = \frac{1}{2} \text{ of } 16 \]

\[ \text{double } \_ \_ \_ \_ \_ \_ = \frac{1}{2} \text{ of } 16 \]
A cuboid has 8 vertices.

4 vertices on the top

4 vertices on the bottom

(a) How many vertices does this 3-D shape have?

(b) A different 3-D shape has 8 vertices.

It has 6 faces. Each face is the same.

Put a ring round the correct name for this 3-D shape.

square pyramid cylinder

cube rectangle
11 (a) Which number is closer to 100?
Put a ring round it.

68 133

Explain how you know.

(b) Which number is closest to 10?
Put a ring round it.

−5 16 −9 0

(c) Which number is closest to 1?
Put a ring round it.

1.4 1.35 0 1.65
The table shows the times that street lights come on one night and go off the next morning.

<table>
<thead>
<tr>
<th>City</th>
<th>Time the lights come on (pm)</th>
<th>Time the lights go off (am)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belfast</td>
<td>6:45</td>
<td>6:13</td>
</tr>
<tr>
<td>Glasgow</td>
<td>6:40</td>
<td>6:05</td>
</tr>
<tr>
<td>London</td>
<td>6:21</td>
<td>5:51</td>
</tr>
<tr>
<td>Manchester</td>
<td>6:30</td>
<td>5:59</td>
</tr>
<tr>
<td>Newcastle</td>
<td>6:28</td>
<td>5:55</td>
</tr>
</tbody>
</table>

(a) Complete the sentence below.

In **Manchester**, the lights come on **15 minutes** earlier than they do in ____________.

(b) In **Glasgow**, the lights go off later than they do in **Newcastle**.

How much later?

__________ minutes

(c) In **Ashford** the lights come on at 6:20pm.

The lights go off 11½ **hours** later.

Complete the table below.

<table>
<thead>
<tr>
<th>City</th>
<th>Time the lights come on (pm)</th>
<th>Time the lights go off (am)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ashford</td>
<td>6:20</td>
<td>__________ : __________</td>
</tr>
</tbody>
</table>
13  (a) Write a number that is both

greater than 10 and a multiple of 4

1 mark

(b) Now write a number that is both

greater than 10 and a square number

1 mark
In October, Jack was ill.

Here is his temperature chart.

(a) What was Jack’s **highest** temperature?

(b) On 16th October, Jack’s temperature was 36.7°C

Mark this point on the graph.
Molly asked the pupils in her class how many pets they had. She recorded her results on a pie chart.

### Key:
- 0 pets
- 1 pet
- 2 pets
- more than 2 pets

(a) What percentage of pupils had only 1 pet?

\[ \underline{\phantom{0}} \% \]

(b) There are 20 pupils in the class.

How many pupils had 0 pets?

\[ \underline{\phantom{0}} \]
(a) The shape on the square grid below has **exactly one right angle**.
Mark the right angle on the shape.

(b) Draw a shape on the square grid below that has **exactly two right angles**.
17 The rule for this sequence is to **add the same number each time**.

Use this rule to write the missing numbers in the sequence.

3  [ ]  [ ]  [ ]  19

1 mark

18 Here is an equation.

\[ x + 30 = 100 \]

Raj says that \( x = 130 \)

Is he correct?

[ ] Yes  [ ] No

Explain your answer.
You can make patterns on square grids using 5 square tiles.

This pattern has one line of symmetry.

Use 5 square tiles to draw a pattern on the grid below that has more than one line of symmetry.
Jack weighs himself.

Then Jack weighs himself together with his dog.

How much does the dog weigh?