Fill in these boxes and read what is printed below.

Full name of centre          Town

Forename(s)                  Surname

Date of birth
Day  Month  Year  Scottish candidate number  Number of seat

1  You may NOT use a calculator.

2  Answer as many questions as you can.

3  Write your working and answers in the spaces provided. Additional space is provided at the end of this question-answer book for use if required. If you use this space, write clearly the number of the question involved.

4  Full credit will be given only where the solution contains appropriate working.

5  Before leaving the examination room you must give this book to the invigilator. If you do not, you may lose all the marks for this paper.
1. Work out the answers to the following.

(a) $683 - 142$

WORKING

ANSWER

(b) $\frac{1}{6}$ of 84

WORKING

ANSWER

(c) 25% of £76

WORKING

ANSWER £
2. The table below shows the days worked by the cleaners in a school.

<table>
<thead>
<tr>
<th></th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
</tr>
</thead>
<tbody>
<tr>
<td>Claire</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Brian</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Morgan</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

(a) Which **two** people work on Thursday?

ANSWER

(b) The supervisor decides that she needs **three** cleaners in the school each day, so she hires Fred.

On which days will Fred work?

ANSWER
3. A high speed train travels at a speed of 115 miles per hour. What distance will it travel in 4 hours?

<table>
<thead>
<tr>
<th>WORKING</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>ANSWER</th>
<th>miles</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
</tr>
</tbody>
</table>
4. The broken line is an axis of symmetry.
Complete the diagram.
5. Blind people can read using Braille.

In Braille, letters are represented by patterns of raised dots.

The word **father** is shown below in Braille.

```
father
```

Another word is shown below in Braille.

```
```

What is this word?

**WORKING**

**ANSWER**
6. The angle shown in the diagram below is $60^\circ$. Use a protractor to draw an angle of $80^\circ$ in the box below.
7. A street has a row of 10 parking spaces for coaches.
Each parking space is 13.8 metres long.
Find the total length of all 10 parking spaces.

WORKING

ANSWER metres

Mark 2

KU RE
8. This is a number machine. A number goes into the machine and the answer comes out.

\[
\begin{array}{c}
\text{IN} \\
3 \\
\end{array}
\quad \rightarrow
\quad +5
\quad \rightarrow
\quad \text{OUT} \\
\begin{array}{c}
8
\end{array}
\]

(a) Here is a different number machine. Complete this number machine.

\[
\begin{array}{c}
\text{IN} \\
5 \\
\end{array}
\quad \rightarrow
\quad \times4
\quad \rightarrow
\quad \text{OUT}
\]

WORKING

(b) Number machines can be put together as shown below.

\[
\begin{array}{c}
3 \\
\end{array}
\quad \rightarrow
\quad +1
\quad \rightarrow
\quad \begin{array}{c}
4
\end{array}
\quad \rightarrow
\quad \times2
\quad \rightarrow
\quad \begin{array}{c}
8
\end{array}
\]

Complete the number machine below.

\[
\begin{array}{c}
\quad \rightarrow
\quad \times2
\quad \rightarrow
\quad \begin{array}{c}
\end{array}
\quad \rightarrow
\quad -5
\quad \rightarrow
\quad \begin{array}{c}
9
\end{array}
\]

WORKING
9. In Texas one summer, there was a heatwave. The temperature stayed above 32° Celsius for 22 days in a row.

The first day of this heatwave was 15 July. On which date did the heatwave end?

WORKING

ANSWER

[END OF QUESTION PAPER]
Fill in these boxes and read what is printed below.

Full name of centre

Forename(s)

Surname

Date of birth

Day

Month

Year

Scottish candidate number

Number of seat

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Day Month Year Number of seat

Scottish candidate number
1. Peter pays 75p for 3 oranges in his local fruit shop. How much will Aisha pay for 5 oranges in the same shop?

WORKING

ANSWER £
2. The number of bananas sold each day in the school tuck shop was recorded over a three-week period.

The results are listed below.

<table>
<thead>
<tr>
<th>Number of Bananas</th>
<th>Tally</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Complete the frequency table.
3. A tiled border can be made using a combination of squares and rectangles as shown.

\[\text{1 square} \quad 6 \text{ rectangles}\]

\[\text{2 squares} \quad 9 \text{ rectangles}\]

(a) Complete this table.

<table>
<thead>
<tr>
<th>Number of squares</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of rectangles</td>
<td>6</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

WORKING

(b) Write down a rule for finding the number of rectangles if you know the number of squares.

RULE
4. Steven has saved up £26. He is also given £59 by relatives for his birthday.

   (a) How much money does Steven have altogether?

<table>
<thead>
<tr>
<th>WORKING</th>
</tr>
</thead>
</table>

   ANSWER | £

   (b) Steven spends some of his money. He buys a computer game and a T-shirt.

   ![computer game](£39.99)  ![T-shirt](£10.99)

   Steven also wants to buy a ticket for a football match.
   The ticket costs £30.
   Can Steven afford to buy the ticket?
   Give a reason for your answer.

<table>
<thead>
<tr>
<th>WORKING</th>
</tr>
</thead>
</table>

   ANSWER (WITH REASON)
A furniture company delivers its furniture in flat packs. One flat pack is in the shape of a cuboid. The cuboid is 1.5 metres long, 1 metre broad and 0.2 metres high.

Find the volume of this cuboid.

**WORKING**

**ANSWER** cubic metres

2
6. Anna has £540.
She pays it into a Golden Saver Account and leaves it for 1 year.

GOLDEN SAVER ACCOUNT

Interest Rate: 3% per year

How much interest will Anna receive at the end of the year?

WORKING

ANSWER £ 2
Mrs McLaughlin’s class wants to raise £60 for charity.
There are 30 pupils in the class and each pupil saves 5p per day.
How many days will it take to raise £60?

WORKING

ANSWER days
8. Bill’s window is broken. He needs to replace the glass.

(a) What area of glass will Bill need to buy?

\[ \text{WORKING} \]

\[ \text{ANSWER} \quad \text{square metres} \quad 2 \]

(b) Glass costs £7.25 per square metre.

\[ \text{How much will Bill pay for the glass?} \]

\[ \text{WORKING} \]

\[ \text{ANSWER} \quad £ \quad 2 \]
9. Part of the net of a cuboid is shown below.

Complete the net.
10. Amy and Paul go to neighbouring schools.

Amy’s lunchtime is from 12 45 to 13 30
Paul’s lunchtime is from 12 50 to 13 45

(a) Paul’s lunchtime ends at 13 45.
Write this as a **12-hour time**.

**ANSWER**

(b) How long does Amy’s lunchtime last?

**WORKING**

**ANSWER** minutes

(c) Paul and Amy like to spend as much of their lunchtime together as possible.
What is the maximum possible time that they can spend together at lunchtime?

**WORKING**

**ANSWER** minutes
11. Leo has bought a dish for his cats, Puss and Boots.
The dish has two circular bowls joined by a straight section.
A sketch of the top of the dish is shown below.

The radius of each circle is 10 centimetres.
The distance between the two circles is 8 centimetres.

Calculate the length of the dish.

WORKING

ANSWER centimetres

3
12. Lorraine is going to put a fence around a rectangular field on her farm. The field is 200 metres long and 180 metres broad.

(a) Calculate the perimeter of the field.

WORKING

ANSWER metres

(b) Fencing is sold in 50 metre rolls.

How many rolls must Lorraine buy?

WORKING

ANSWER rolls

[2500/402] Page thirteen

[Turn over
The Soapy Bubble Car Wash Company has five programmes for washing cars. The programmes are A, B, C, D and E.

The graph below shows how often programmes A, B, C and D were used in a one week period.

(a) Write down the number of times programme D was used.

(b) Programme E was used 25 times.

Mark a cross (✘) on the graph to show this.
(c) The cost of each programme is shown below.

<table>
<thead>
<tr>
<th>Programme</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>£1</td>
</tr>
<tr>
<td>B</td>
<td>£2</td>
</tr>
<tr>
<td>C</td>
<td>£3</td>
</tr>
<tr>
<td>D</td>
<td>£4</td>
</tr>
<tr>
<td>E</td>
<td>£5</td>
</tr>
</tbody>
</table>

How much money did the Car Wash Company take in during the week?

**Answer**

£
14. Compared to some meats, turkey has a low fat content.

A nutrition label on a turkey on sale in a supermarket states:

<table>
<thead>
<tr>
<th>Contents per 100 grams</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROTEIN 19.9 grams</td>
</tr>
<tr>
<td>FAT 8.8 grams</td>
</tr>
<tr>
<td>SALT 0.1 grams</td>
</tr>
</tbody>
</table>

How many grams of fat are there in a 6 kilogram turkey?

WORKING

ANSWER grams

4