**2500/401**

**NATIONAL QUALIFICATIONS 2004**

**FRIDAY, 7 MAY**

**9.00 AM – 9.20 AM**

**MATHEMATICS STANDARD GRADE**

Foundation Level

Paper 1

Non-calculator

---

**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) \[ 402 + 159 + 73 \]

WORKING

ANSWER

(b) \[ 9.1 - 5.8 \]

WORKING

ANSWER

(c) \[ \frac{1}{2} \text{ of } 108 \]

WORKING

ANSWER

[2500/401] Page two
2. Work out 50% of £17.

WORKING

ANSWER £

3. Mark works in a cafe.
His rate of pay is £4.32 per hour.
On Monday he works for 6 hours.
How much is he paid?

WORKING

ANSWER £

[Turn over]
4. A dispenser holds 1 litre of liquid soap.

Each time the dispenser is used 4 millilitres of soap comes out.

How many times can the dispenser be used before the soap is finished?

WORKING

ANSWER

3
5. Issue number 1 of MUSIC magazine went on sale in January 2004. A new issue goes on sale each month.

(a) What will be the issue number for October 2004?

WORKING

<table>
<thead>
<tr>
<th>ANSWER</th>
<th>Issue Number</th>
</tr>
</thead>
</table>

(b) When will issue number 16 go on sale?

WORKING

<table>
<thead>
<tr>
<th>ANSWER</th>
<th>Month</th>
<th>Year</th>
</tr>
</thead>
</table>
6. Pat advertises his motorbike for sale at £950. Dave offers to buy it for £870. They agree on a price exactly halfway between £950 and £870. What price do they agree on?

WORKING

ANSWER £

7. In a survey, 80 pupils were asked how they travelled to school. The results are shown in the pie chart below.

[Diagram of a pie chart showing the percentages of pupils who travelled by bus, car, cycle, and walk.]

6 pupils cycled to school. How many pupils travelled by car?

WORKING

ANSWER pupils
8. The table shows the charges for car parking at an airport.

<table>
<thead>
<tr>
<th>AIRPORT PARKING CHARGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAR PARK A</td>
</tr>
<tr>
<td>CAR PARK B</td>
</tr>
</tbody>
</table>

(a) Calculate the cost of parking a car in car park B for 10 days.

**WORKING**

**ANSWER** £

(b) Farrah is going to park her car at the airport for 6 days.
Which car park would be cheaper for her?
Give a reason for your answer.

**WORKING**

**ANSWER INCLUDING REASON**

[END OF QUESTION PAPER]
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 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. Calculate the size of the shaded angle in the circle below.

\[150^\circ \quad 110^\circ\]

WORKING

[Blank space for working]

ANSWER

[Blank space for answer]
2. These 3 coins are tossed at the same time.

On landing, each coin can show head or tail.
One possible result is shown on the table.

Complete the table to show five other possible results.
3. This is a scale drawing of a chest of drawers.

![Diagram of a chest of drawers]

(a) Measure the width of the chest of drawers in the drawing.

<table>
<thead>
<tr>
<th>ANSWER</th>
<th>centimetres</th>
</tr>
</thead>
</table>

(b) The scale of the drawing is 1 centimetre represents 15 centimetres.
Find the actual width of the chest of drawers.

WORKING

<table>
<thead>
<tr>
<th>ANSWER</th>
<th>centimetres</th>
</tr>
</thead>
</table>
4. The broken line is an axis of symmetry. Complete the diagram.
5. The ages of a group of college students are listed below.

\[
\begin{array}{cccccc}
19 & 23 & 19 & 18 & 19 & 20 \\
21 & 18 & 21 & 19 & 18 & 19 \\
\end{array}
\]

(a) Complete the frequency table for these ages.

<table>
<thead>
<tr>
<th>Age (years)</th>
<th>Tally</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(b) Write down the mode.

<table>
<thead>
<tr>
<th>ANSWER</th>
<th>years</th>
</tr>
</thead>
</table>
6. The dimensions of a drop-leaf table are as shown.

When the table is opened out the three sections form a rectangle.

Find the area of this rectangle.

**WORKING**

**ANSWER** square centimetres
7. A model train goes round a track once every 10 seconds.
How long does it take to go round the track 25 times?
Give your answer in minutes and seconds.

WORKING

<table>
<thead>
<tr>
<th>ANSWER</th>
<th>minutes</th>
<th>seconds</th>
</tr>
</thead>
</table>

3
8. A fence is made by joining posts with lengths of wire. Each length of wire is 2 metres.

(a) Complete this table.

<table>
<thead>
<tr>
<th>Number of posts</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length of wire (metres)</td>
<td>2</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(b) Write down a rule for finding the length of wire if you know the number of posts.

RULE
9. An art gallery sells prints of the paintings which it has on display.

(a) The print shown below is an enlargement of the painting.

The length and breadth of the print are each one and a half times the length and breadth of the painting.

Find the length of the print.

**WORKING**

<table>
<thead>
<tr>
<th>ANSWER</th>
<th>centimetres</th>
</tr>
</thead>
</table>

[2500/402] Page ten
10. At the school fair there is a GRID GAME.

**GRID GAME**

- Pay 20 pence
- Write your name in a box
- Win £2 if you choose a winning box

(a) Alan chose box C6.

Write “Alan” in box C6.
10. (continued)

(b) All the boxes are sold and four winners get £2 each.

How much profit is made from the Grid Game?

WORKING

ANSWER £
11. (a) Calculate the volume of this box.

(b) Identical tins are packed into the box as shown.
Each tin is a cylinder.

Calculate the radius of each tin.
11. (continued)
(c) Each tin is 5 centimetres high.

How many tins can be packed into the box?

WORKING

ANSWER | tins

Marks: 3
12. Mr and Mrs McLaughlin bought the bungalow described in the advertisement below.

**BUNGALOW**

Lounge, Dining-room, 3 Bedrooms.
Garage. Gas central heating.
Offers over £129 000

They paid 15% more than the price in the advertisement.
How much did they pay?

**WORKING**

**ANSWER**  £
13. The height of this door is 2.1 metres.
It has two glass panels.
Each glass panel is 75 centimetres long.
Each of the three gaps shown in the diagram is the same length.

Find the length of each gap.

WORKING

ANSWER | centimetres

[END OF QUESTION PAPER]