Instructions to Candidates

- Answer all questions.
- This paper carries a total of 25 marks.
- Calculators and protractors are NOT ALLOWED.
1. Arrange the following numbers in order, **largest first**.

0.07 , 0.7 , 0.27 , 0.72 , 7.2 , 2.7

____ , ______ , ______ , ______ , ______ , ______ .

___________________________________________________ __________ (1 mark)

2. Which three of the following are **equivalent to** $\frac{3}{4}$?

$\frac{4}{3}$ , $\frac{6}{8}$ , 34% , 75% , $\frac{21}{28}$ , 3.4

____ , ______ , ______

___________________________________________________ __________(3 marks)

3. Work out as **decimals**:

a) $\frac{139}{100} = \underline{ ________}$

b) $0.075 \times 100 = \underline{ ________}$

c) $1 - 0.88$

d) $(2.46 + 1.58) \div 4$

Ans:_______ Ans:_______

___________________________________________________ __________(5 marks)

4. Fill in the blanks with the following numbers: 2 , 3 , 4 , 12 , 24

a) ____ and ____ are multiples of 6.

b) ____ and ____ are factors of 6.

___________________________________________________ __________(3 marks)

c) The LCM of ____ and 5 is 20.
5. Mariella and Fleur are playing a game using this spinner. Mariella wins if she gets a **quadrilateral** while Fleur wins if she gets a **prime number**.

a) What is the probability that **Mariella wins**?
   Ans: 

b) What is the probability that **Fleur wins**?
   Ans: 

c) Underline the shape which gives a win to both players.
   Rhombus, Parallelogram, Trapezium.

(3 marks)

6. a) **Shade** the circle which shows 43.7.

b) Write down the value indicated by the square marked A.

Ans: 

(2 marks)

7. a) Round the following numbers correct to **1 decimal place**.

   (i) 9.0543 → 
   (ii) 6.198 → 
   (iii) 0.51 → 

b) Use your answers in (a) to **estimate** the value of:
   $9.0543 + 6.198 \times 0.51$

Ans: 

(4 marks)
8. Work out the value of each angle marked with a letter.

\[ \begin{align*}
\text{Ans:} & \quad p = \quad 79^\circ \quad q = \quad 162^\circ \quad r = \quad \quad^\circ \quad s = \quad \quad^\circ \\
\text{END OF PAPER} & 
\end{align*} \]
1. Use your calculator to work out the following:

(a) \((3.5 + 7.92) ÷ 0.02\)

Ans: _______

(b) \(\sqrt{80}\) Correct to 1 decimal place.

Ans: _______

(c) \(4.96^2\) Correct to 3 decimal places.

Ans: _______

_________________________________________________________________________ (5 marks)
2. The diagram shows a right-angled triangle PQR drawn inside a rectangle ABCD.

(a) Use your ruler to measure the following:

\[ AB = \quad \text{cm} \quad ; \quad BC = \quad \text{cm} \]

\[ PR = \quad \text{cm} \quad ; \quad QR = \quad \text{cm} \quad ; \quad PQ = \quad \text{cm} \]

(b) Use your measurements to calculate:

(i) the perimeter of the rectangle.  
\[ \text{Ans: } \quad \text{cm} \]

(ii) the area of the rectangle.  
\[ \text{Ans: } \quad \text{cm}^2 \]

(iii) the area of the triangle.  
\[ \text{Ans: } \quad \text{cm}^2 \]

(iv) the shaded area.  
\[ \text{Ans: } \quad \text{cm}^2 \]  

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(9 marks)
3. (a) **Simplify**: \(4a + 3a + 2a\)  
(b) **Expand**: \(4(3y - 1)\)

\[
\text{Ans: } \quad \quad \text{Ans: } \quad \quad \quad \quad
\]

(c) If \(A = 2x - y\)  
(d) **Solve** the equation: \(3x + 12 = 27\)  

Calculate \(A\) when \(x = 3\) and \(y = -2\).

\[
\text{Ans: } A = \quad \quad \quad \quad \text{Ans: } x = \quad \quad \quad \quad \quad \quad \quad (7 \text{ marks})
\]

4. This pattern is made of squares. Each square has an area of \(5 \text{ cm}^2\).

![Pattern stages](image)

(a) Draw the missing pattern in stage 5.  
(b) Complete the table.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Number of squares</th>
<th>Area in cm(^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>4</td>
<td>20</td>
</tr>
<tr>
<td>3</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[
\text{ }(5 \text{ marks})
\]
5. Anne sits for 7 examinations and scores the following marks: 23, 60, 65, 67, 68, 72, 72

(a) What is the **median** mark?  
Ans: median = ______

(b) Calculate the **mean** mark.  
Ans: mean = ______

(c) What is the **mode**?  
Ans: mode = ______

(d) Underline the correct word:

The (median, mean, mode) **best represents** all of Anne’s scores.

________________________________________________________________________(5 marks)

6. A survey on all the classes at a school is carried out to find the number of left-handed students in each class. Complete the frequency table and the bar chart below that show the results.

<table>
<thead>
<tr>
<th>Number of left-handed students</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency (Number of classes)</td>
<td>2</td>
<td>12</td>
<td>9</td>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

![Bar chart]

________________________________________________________________________(5 marks)
7.
This is a map of a village with a church, a pharmacy, a school, a bank, a council hall and a shopping centre.

- The church is South of the school and North of the pharmacy.
- The bank is West of the church and NW of the council hall.
- The shopping centre is NE of the pharmacy.

(a) Write down these six places on the map.

(b) Write down the three-figure bearing of the shopping centre from the pharmacy.

Ans: __________
______________________________ (7 marks)
8. (a) Which of these shapes have reflective symmetry only? Ans: _________________
(b) Which of these shapes have rotational symmetry only? Ans: _________________
(c) Which of these shapes have both reflective and rotational symmetry?
   Ans: _________________
(d) Which of these shapes have neither reflective nor rotational symmetry?
   Ans: _________________

9. 3750 persons attended a concert. 24% were adults, 62% were youths and the rest were children.

(a) What percentage were children?
   Ans: __________ __%

(b) How many were adults?
   Ans: ____________adults

(c) How many were children?
   Ans: ____________children

___________________________________________________ _________________(5 marks)
10. This graph is a conversion graph for gallons and litres.

Use this graph to:

(a) Convert 5 gallons into litres.  

Ans: _______ litres

(b) Convert 20 litres into gallons.  

Ans: _______ gallons

___________________________________________________ (4 marks)
11. (a) Use ruler and protractor only to make an accurate drawing of this triangle:

(b) Translate the quadrilateral 4 right and 5 down.

12. Martin is 6 years old, Ralph is 18 years old and Brian is 30 years old.

(a) Simplify the ratio:

\[ 6 : 18 : 30 = \text{____} : \text{____} : \text{____} \]

(b) Divide €288 between Martin, Ralph and Brian in the ratio of their ages.

Ans: Martin gets €\text{_______}

Ralph gets €\text{_______}

Brian gets €\text{_______}
13. (a) Complete the table for \( y = 2x + 1 \).

<table>
<thead>
<tr>
<th>( x )</th>
<th>-2</th>
<th>-1</th>
<th>0</th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>( 2x )</td>
<td>-2</td>
<td></td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>+1</td>
<td>+1</td>
<td>+1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( y )</td>
<td>-1</td>
<td></td>
<td>5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(b) Draw the graph of \( y = 2x + 1 \) on the grid below.

(c) Write down the value of \( y \) when \( x = 1.5 \).

Ans: \( y = \) _____

___________________________________________________ (6 marks)

END OF PAPER