Name: ________________________________ Class: ________________

<table>
<thead>
<tr>
<th>Question</th>
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<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>Total</th>
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Instructions to Candidates

- Answer all questions.
- This paper carries a total of 25 marks.
- Calculators and protractors are not allowed.
1. Place the following **four** numbers in order of size, the **smallest** first.

\[500 \times 1000 \quad 56000 \quad 10^7 \quad 1 \text{ million three hundred thousand}\]

2. Mario wants to share €527 equally among **17** people.

How much does **each** person get?

3. Change \(\frac{22}{25}\) to a **decimal** number.

4. Write 1260 as the product of **prime numbers**.
5. A bag of potatoes weighs 75 kg.

Mary carries \( \frac{2}{5} \) of it, and Jane carries 44% of it.

(a) How much weight is Mary carrying?

__________________

(b) How much weight is Jane carrying?

__________________

(c) Who is carrying more weight and how much more is she carrying?

__________________  __________________

(5 marks)

6. Jonathan has these seven number cards:

\[10\quad -10\quad 4\quad -8\quad 9\quad -3\quad -1\]

Choose two cards so that

(a) \[\square + \square = 0\]

(b) \[\square - \square = 12\]

(c) \[\square \times \square = 8\]

(d) \[\square \div \square = -3\]

Write your answers above in the blank cards.

(4 marks)
7. **Round** each number to the nearest whole number and then **work out** the approximate answer.

The first one is done for you.

<table>
<thead>
<tr>
<th>Problem</th>
<th>Nearest whole number</th>
<th>Approximate answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) $6.3 \times 4.51 + 2.9$</td>
<td>$6 \times 5 + 3$</td>
<td>33</td>
</tr>
<tr>
<td>(b) $8.1 + 6.68 - 4.49$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(c) $25.33 - 3.8 \times 6.09$</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(4 marks)

END OF PAPER
1. I left home at **22:30** to spend the night fishing. I returned home **5 hours 40 minutes** later.

   (a) At what time did I return?

   ____________________

   (b) **Show** this time on the cuckoo clock.
2. A toy is packed in a box.
   The box is 15 cm long, 15 cm high and 10 cm wide.
   (a) What is the volume of the box in cm$^3$?

   ______________________

   The boxes are packed in a large wooden crate.
   It can contain exactly 840 toy boxes.
   (b) What volume do these boxes occupy?

   ______________________ cm$^3$

   (c) Write this volume in m$^3$.

   ______________________ m$^3$

   Each toy box weighs 750 g.
   The wooden crate weighs 5 kg when empty.
   (d) What is the total weight in kg of the crate when full of toy boxes?

   ______________________

   (7 marks)

3. Work out the area of shape ABCDE.

   ______________________

   (5 marks)
4. From this tombola card,

\[
\begin{array}{cccccc}
11 & 25 & 40 & 64 & 72 & \\
5 & 27 & 31 & 54 & 81 & \\
13 & 38 & 58 & 68 & 87 & \\
\end{array}
\]

(a) list any two prime numbers. ________    ________
(b) list any two multiples of 3. ________    ________
(c) list all the three square numbers. ________    ________    _______
(d) find a number and its square root. ________    ________

(4 marks)

5. Write in order the smallest first:

\[0, \quad \frac{-5}{6}, \quad \frac{2}{3}, \quad \frac{1}{2}.\]

______________________

(2 marks)

6. Continue writing the LOGO commands below to draw the shape on the left. (‘t.s.’ means ‘turtle steps’.)

PD
FD 80
RT

______________________

(3 marks)
7. (a) My sister Mary worked at a flower shop after school. Dad promised to **double** what she earned from the flower shop. Mum promised to give her €5 every week.

Fill in the number machine below to show how much Mary received from her parents, last week, after earning €15 for working at the flower shop.

```
INPUT       OUTPUT
€           €
```

(b) Use your number machine to calculate how much money Mary earned from the flower shop this week when she earned €45 from her parents.

```
INPUT       OUTPUT
€           €
```

8. Line **PQ** is a line of symmetry.

(a) Draw the rest of the shape.

(b) Draw all the lines of symmetry of the completed shape.

(c) Write down the order of rotational symmetry of the completed shape.

9. **Fifteen** students go to an art exhibition. Their ages are as follows:

```
11 12 10 12 9 11 12 10 9 12 11 12 10 12 12
```

(a) What is the **mode** of their ages? ________________

(b) What is the **range** of their ages? ________________

(c) Work out the **mean** of their ages.

______________
10. Write the volume of liquid in these test tubes:

(a) Test tube A ______________________
(b) Test tube B ______________________
(c) Test tube C ______________________

(3 marks)

11. (a) Simplify (tidy up): \(5x - 3y - 2x + 5y\)


(b) Solve for \(x\): \(4(x - 2) = 12\)


(c) A regular hexagon has each side \((2n + 3)\) cm long.
   (i) Write down an equation for the perimeter \(P\) of the hexagon. Simplify your equation.


   (ii) What is the perimeter of the hexagon when \(n = 4\)?


(8 marks)
12. These patterns are made up of black and white squares.

1st pattern

2nd pattern

3rd pattern

Complete this table. You have four answers to fill in.

<table>
<thead>
<tr>
<th></th>
<th>1st pattern</th>
<th>2nd pattern</th>
<th>3rd pattern</th>
<th>5th pattern</th>
<th>pattern</th>
</tr>
</thead>
<tbody>
<tr>
<td>White squares</td>
<td>4</td>
<td>6</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black squares</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Total of squares</td>
<td>5</td>
<td>8</td>
<td>11</td>
<td>17</td>
<td>23</td>
</tr>
</tbody>
</table>

(4 marks)

13. Look carefully at the diagram. Work out the missing angles, giving reasons for your answers.

(a) \( p = \) \( \)°

Reasons: ____________________________

\( \)°

Reason: ____________________________

\( \)°

Reason: ____________________________

(6 marks)

14. Jesmond throws a six-sided dice. Work out the probability that he scores:

(a) an even number  

(b) a number greater than 4  

(c) a seven  

(3 marks)
15. (a) **Plot** the following:

A (4, –1)  B (4, –4)  C (6, –3)

D (8, –4)  E (8, –1)

(b) Join AB, BC, CD, DE and EA.

(c) Complete:

The shape I have drawn is the _________ of shape P

in the ____ axis.

(d) **Translate** shape P, 10 to the left and 6 down.

16. The pie chart represents the number of men, women, boys and girls that went to a party.

There were 120 people in all.

(a) Complete the following:

The number of

men was ________________ .

women was ________________ .

boys was ________________ .

girls was ________________ .

(b) Draw a bar chart to show this information.
17. (a) Using compasses and ruler only, make an **accurate** drawing of this triangle.

(b) Measure the length of BC from your drawing.

BC = ________________

(4 marks)

END OF PAPER