FORM 3 MATHEMATICS SCHEME D TIME: 30 minutes
Non Calculator Paper

Name: ____________________________ Class: __________

|   |   |   |   |   |   |   |   |   |   |   | Total |
|---|---|---|---|---|---|---|---|---|---|-----|

Instructions to Candidates

- Answer ALL questions.

- This paper carries a total of 25 marks.

- Calculators and protractors are NOT ALLOWED.
1. Work out:
   a) \((3 + 4) - 2 = \) ______
   b) \((9 - 7) + (8 - 4) = \) ______

   (2 marks)

2. Follow the rule and continue the sequence.
   a) The sequence is ADD 3.
      5, 8, 11, ___,____
   b) The sequence is MINUS 5.
      100, 95, 90, ____, ____

   (2 marks)

3. Work out:
   a) \(\frac{1}{2}\) of €1 = _____cent
   b) \(\frac{1}{4}\) of €1 = _____cent

   (2 marks)
4. These are right angles divided into two. Each right angle is 90º. Work out (do not measure) the value of the unknown angle.

\[ a = \_ \_ \_ \_ \]

\[ b = \_ \_ \_ \_ \]

(2 marks)

5. Find ‘100 less than’ and ‘100 more than’ to complete the table below.

<table>
<thead>
<tr>
<th>−100</th>
<th>+100</th>
</tr>
</thead>
<tbody>
<tr>
<td>115</td>
<td>215</td>
</tr>
<tr>
<td>331</td>
<td></td>
</tr>
<tr>
<td>728</td>
<td></td>
</tr>
</tbody>
</table>

(3 marks)

6. Emma bought a tin of beans for 19c and a loaf of bread for 54c.

a) How much did she pay in all?

Ans: _____c

b) Work out the change she gets from €2.

Ans: _____

(2 marks)
7. This tally chart shows the drinks sold on a Saturday morning.

<table>
<thead>
<tr>
<th>DRINK</th>
<th>TALLY</th>
<th>FREQUENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coffee</td>
<td></td>
<td>16</td>
</tr>
<tr>
<td>Tea</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Milk</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Juice</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a) **Fill in** the last column.

b) Which drink was the **most popular**? __________

c) Which drink was the **least popular**? __________

d) What was the **total number** of drinks sold? _____

(4 marks)

8. Solve the equations.

a) $10 + p = 12$

b) $3t = 36$

$p = ____

$t = ____$

(3 marks)
9. Use your ruler and pencil to divide these shapes into **rectangles**.

Number of rectangles is ____

Number of rectangles is ____

(2 marks)

10. Round these prices to the nearest euro.

<table>
<thead>
<tr>
<th>Object</th>
<th>Price</th>
<th>To the nearest euro</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCARF</td>
<td>€10.74</td>
<td></td>
</tr>
<tr>
<td>JEANS</td>
<td>€35.49</td>
<td></td>
</tr>
<tr>
<td>SKIRT</td>
<td>€47.09</td>
<td></td>
</tr>
</tbody>
</table>

(3 marks)
1. Put these amounts in order, starting with the smallest:
   a) €0.90, €0.40, €0.60
      ______, ______, ______
   b) 1.25 kg, 2.40 kg, 1.15 kg, 2.04 kg
      ______, ______, ______, ______
      (2 marks)

2. Complete the table below.

<table>
<thead>
<tr>
<th>Is it a multiple of 3?</th>
<th>Is it a factor of 30?</th>
<th>Is it a prime number?</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>12</td>
<td></td>
<td>No</td>
</tr>
</tbody>
</table>

(4 marks)
3. Complete the following:

a) \( \frac{1}{3} = \begin{array}{c}
\text{\hspace{1cm}}
\end{array} = \begin{array}{c}
\text{\hspace{1cm}}
\end{array} = \frac{6}{6} \)

b) \( \frac{3}{4} = \begin{array}{c}
\text{\hspace{1cm}}
\end{array} = \begin{array}{c}
\text{\hspace{1cm}}
\end{array} = \frac{\text{---}}{6} \)

(3 marks)

4. Draw the next pattern in each row:

(6 marks)
5. a) Mary and Paul share 20 chocolate cakes in the ratio 2: 3. How many cakes do they each have?

Mary gets ______ cakes
Paul gets ______ cakes

b)

Fill in:

(i) There are ____ right-angled triangles in the diagram.

(ii) There are ____ isosceles triangles in the diagram.

(iii) Complete:

number of quadrilaterals : number of triangles =

_____ : _____  SIMPLIFYING  _____ : _____

(6 marks)
6. a) Last Monday, 97% of the students were present. What percentage of the students were absent?

Ans: Students absent: ______%  

b) Work out 10% of 20 kg.

Ans: ______kg  

c) Write 50% as a fraction. Simplify your answer.

Ans: 50% = ______

(6 marks)

7. Simplify:

a) $3b + 2b = ______$  

b) $8x - 3x = ______$  

c) $2y + 3z - z + 3y = ______$  

(4 marks)
8. Draw the shape of the shaded face shown. (The first one is done for you.)

(6 marks)
9. Match the following:

- Has no sides
- 4 angles of $90^\circ$
- Has 5 sides
- Opposite sides parallel

(6 marks)
10. Complete the following function machines:

a) 
\[
\begin{array}{c}
6 \quad +7 \quad \rightarrow \quad \quad \rightarrow \\
\end{array}
\]

b) 
\[
\begin{array}{c}
8 \quad \times 3 \quad \rightarrow \quad \div 2 \quad \rightarrow \\
\end{array}
\]

(4 marks)

11. a) Mark has \( m \) marbles and wins 4. How many marbles does Mark have now? **Underline the correct answer.**

Mark now has \( 4m \quad m + 4 \quad m - 4 \) marbles.

b) Each side of a square is \( x \) cm long. What is the perimeter equal to?

\[
\text{Ans: Perimeter is } x \text{ cm}
\]

c) Work out the value of \( 2b + c \) when \( b = 4 \) and \( c = 7 \).

\[
\text{Ans: } 2b + c = \_
\]

(6 marks)
12. a) Draw the reflection of the shape in the y-axis.

b) (i) **Both** the x- and the y-axis are lines of symmetry in the grid below. Complete the diagram.

(ii) The area of the given shaded figure is 22.5 cm$^2$. What is the total area of the complete diagram?

Ans: Total area is _____ cm$^2$  

(8 marks)
13. Read the statement and **tick** the correct probability.

<table>
<thead>
<tr>
<th>Statement</th>
<th>IMPOSSIBLE</th>
<th>POSSIBLE</th>
<th>CERTAIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thursday will follow Wednesday.</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>It will be dark tomorrow night.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tomorrow you will see a dinosaur at school.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>You will go to the sea this summer.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>It will rain during summer.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(4 marks)

14. Look at this diagram.

a) X is half way between points P and Q. What are the coordinates of point X?

Ans: Point X = ( , )

b) Shape PQRS is a **rectangle**. What are the coordinates of point S?

Ans: Point S = ( , )

(4 marks)
15. Work out the angles marked with letters in the diagrams below.

Ans: $a^\circ = ____^\circ$, $b^\circ = ____^\circ$  

(6 marks)

Ans: $c^\circ = ____^\circ$