INSTRUCTIONS TO CANDIDATES

• Answer all questions.

• This paper carries a total of 20 marks.

• Calculators and protractors are not allowed.
1 Underline the correct day of the week.

28th August 2012 will be a

<table>
<thead>
<tr>
<th></th>
<th>S</th>
<th>M</th>
<th>T</th>
<th>W</th>
<th>T</th>
<th>F</th>
<th>S</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>Tuesday</td>
<td>9</td>
<td>10</td>
<td>11</td>
<td>12</td>
<td>13</td>
<td>14</td>
<td>15</td>
</tr>
<tr>
<td>Wednesday</td>
<td>16</td>
<td>17</td>
<td>18</td>
<td>19</td>
<td>20</td>
<td>21</td>
<td>22</td>
</tr>
<tr>
<td>Thursday</td>
<td>23</td>
<td>24</td>
<td>25</td>
<td>26</td>
<td>27</td>
<td>28</td>
<td>29</td>
</tr>
</tbody>
</table>

2 (1 mark)

2 a) Complete the table.

<table>
<thead>
<tr>
<th>Freezer temperature</th>
<th>Room temperature</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>−12 °C</td>
<td>18 °C</td>
<td></td>
</tr>
</tbody>
</table>

b) The temperature of the freezer goes down by 5°C.

New temperature in freezer = ____________ °C.

(2 marks)

3 (2 marks)

On the number line mark the fractions \( \frac{2}{5} \) and \( \frac{7}{10} \).

\[
\begin{array}{c}
0 \quad \boxed{\frac{3}{10}} \quad 1
\end{array}
\]
4  a) **Simplify** the following expression.

\[ 2s - 3w + s - 4w = \quad \] 

b) Find the **value** of the expression when \( s = 6 \) and \( w = 2 \).

5  

**Fill in:**

a) The film **starts** at quarter to 9 and **ends** at _________ _________ 10.

b) The film is ____________ hours long.

6  Alan sat for 5 mathematics tests. These are his marks.

\[ 76 \quad 52 \quad 85 \quad 64 \quad 70 \]

a) **Median** mark = __________

b) **Range** = __________

7  Work out the **value of the angle marked** \( x \).

\[ \text{Angle } x = \quad ^\circ \]

\[ (2 \text{ marks}) \]
Underline the correct words.

Triangle B is a (translation, reflection, rotation) of triangle A by moving ten squares (right, left) and (two, three, four) squares down.

(2 marks)

This is a pattern made up using balls.

Pattern 1  Pattern 2  Pattern 3  Pattern 4

a) Draw the next pattern.

b) _______ balls are needed to draw Pattern 6.

(2 marks)

Match correctly the values of column A with those of column B. The first one is done for you.

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 \times 20</td>
<td>8</td>
</tr>
<tr>
<td>6 + 2 \times 4</td>
<td>10</td>
</tr>
<tr>
<td>25% of 40</td>
<td>15</td>
</tr>
<tr>
<td>2^3</td>
<td>14</td>
</tr>
</tbody>
</table>

(3 marks)
1 Fill in:
   a) $64 \text{ kg} = \underline{\quad} \text{ grams}$
   b) $9 \text{ minutes} = \underline{\quad} \text{ seconds}$
   c) $\underline{\quad} \text{ km} = 3000 \text{ metres}$

(3 marks)

2 Complete the LOGO statement to draw the letter H

\[
\begin{align*}
&PD \\
&\text{FD 200 BK\(\_\_\_\_\) RT90} \\
&\text{FD 75 LT\(\_\_\_\_\)} \\
&\text{FD 100 BK\(\_\_\_\_\)} \\
&\text{PU HOME}
\end{align*}
\]

(3 marks)
Use the given set of numbers above and choose:

a) the **smallest odd** number ____________

b) the **largest even** number ____________

c) a **square** number ______________

d) a **prime** number ______________

e) a **multiple of 9** ________________

(5 marks)

4 a) Fill in.

\[
\frac{20}{100} = \frac{\boxed{1}}{\boxed{1}}
\]

b) Fill in:

\[
20\% \text{ of } €45 = €\boxed{_______}
\]

c) Work out **80\%** of €45.

€ ____________

(6 marks)
5 The diagram shows the angles of a quadrilateral.

\[
\begin{array}{c}
80^\circ \\
95^\circ \\
g \\
65^\circ \\
h
\end{array}
\]

a) Fill in: \( g = \:\) _______ \( ^\circ \).

b) The angles on a straight line add up to _______ \( ^\circ \).

c) Fill in: \( h = \:\) _______ \( ^\circ \).

d) The sum of the angles in a quadrilateral is _______ \( ^\circ \).

(6 marks)

6 An aeroplane leaves Malta at 11.45 a.m. The trip to Milan takes 2½ hours.

a) Fill in:

i) The trip takes ______________ minutes.

ii) The aeroplane arrives in Milan at __________ p.m.

b) Write the arrival time using the 24-hour clock.

Arrival time = _______ : _______

(6 marks)
7  A car costs €9600.

Maria pays half the cost as deposit.

a) Deposit = €__________

b) She pays €150 every month for 3 years.
   i) Fill in: There are ___________ months in 3 years.
   
   ii) Work out the total amount of the monthly payments.

   Total amount = €__________

iii) How much does it cost Maria to buy the car?

   €__________

(8 marks)

8  a) Simplify the following ratios.
   
   i) 150 g : 900 g  
   ii) 80 cm : 4 m

b) John and Andrew have 180 marbles altogether. The ratio of marbles John : Andrew = 2 : 3. Work out the number of marbles that John and Andrew have.

   John has ____________ marbles

   Andrew has ____________ marbles

(8 marks)
9 The graph shows points plotted for the equation \( y = 3x - 2 \).

   a) On the graph draw a line through the given points.

   b) When \( x = 2 \), \( y = \) __________.

   c) When \( y = -5 \), \( x = \) __________.

   d) ( _____ , _____ ) is another coordinate of a point which is on the line.

(6 marks)

10 Underline the correct number for the properties of each shape.
   The first one is done for you.

<table>
<thead>
<tr>
<th>SHAPE</th>
<th>NAME</th>
<th>LINES OF SYMMETRY</th>
<th>SUM OF INTERIOR ANGLES</th>
<th>NUMBER OF DIAGONALS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>RECTANGLE</td>
<td>(0, 1, 2, 3)</td>
<td>(180 °, 360 °, 540 °)</td>
<td>(0, 1, 2, 3, 4)</td>
</tr>
<tr>
<td></td>
<td>EQUILATERAL TRIANGLE</td>
<td>(0, 1, 2, 3)</td>
<td>(180 °, 360 °, 540 °)</td>
<td>(0, 1, 2, 3, 4)</td>
</tr>
<tr>
<td></td>
<td>ISOSCELES TRIANGLE</td>
<td>(0, 1, 2, 3)</td>
<td>(180 °, 360 °, 540 °)</td>
<td>(0, 1, 2, 3, 4)</td>
</tr>
<tr>
<td></td>
<td>KITE</td>
<td>(0, 1, 2, 3)</td>
<td>(180 °, 360 °, 540 °)</td>
<td>(0, 1, 2, 3, 4)</td>
</tr>
<tr>
<td></td>
<td>RHOMBUS</td>
<td>(0, 1, 2, 3)</td>
<td>(180 °, 360 °, 540 °)</td>
<td>(0, 1, 2, 3, 4)</td>
</tr>
</tbody>
</table>

(6 marks)
11 The diagram below shows a rectangular swimming area. The swimming pool is in the form of a circle.

![Diagram of a rectangular swimming area with a circular pool inside.](image)

a) The radius of the circle is ___________ m.

b) Use \( A = \pi r^2 \) to work out the area of the swimming pool correct to the nearest m².

\[
\text{Area of swimming pool} = \text{__________} \text{ m}^2
\]

c) Work out the area of the rectangular swimming area.

\[
\text{Rectangular area} = \text{_______} \text{ m}^2
\]

d) Work out the shaded area correct to the nearest m².

\[
\text{Shaded area} = \text{__________} \text{ m}^2
\]
Some students were asked to name a country that they would like to visit. The following are the responses given.

<table>
<thead>
<tr>
<th>Country</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spain</td>
<td>4</td>
</tr>
<tr>
<td>Italy</td>
<td>2</td>
</tr>
<tr>
<td>Germany</td>
<td>0</td>
</tr>
<tr>
<td>England</td>
<td></td>
</tr>
<tr>
<td>France</td>
<td></td>
</tr>
</tbody>
</table>

Total number of students: 8

b) Complete the bar chart.

c) A student is chosen at random. Write down the probability that the student chooses Spain. (Write your answer as a fraction in its lowest terms).

\[
\frac{4}{8} = \frac{1}{2}
\]
The diagram shows transformations on triangle T.

a) Fill in:
   i) Triangle R is a __________________ of triangle T in the y axis.
   ii) Triangle S is an enlargement of triangle T by scale factor ________.

b) Triangle T is reflected in the x axis.
   Draw the new triangle on the diagram.

(4 marks)

END OF PAPER