Instructions to Candidates

- Answer ALL questions.
- This paper carries a total of 20 marks.
- Calculators and protractors are not allowed.

1. This is a bottle of lemonade.
   a) Underline the correct statement.
      i. The bottle is about 70% full.
      ii. The bottle is less than half full.
      iii. The bottle is nearly empty.
   
   b) The bottle has 1 litre of lemonade when full. The amount of lemonade left in the bottle is about
      
      50 ml  500 ml  700 ml

      _______ ml

      (2 marks)
2. a) Complete the sequence below.
   
   10, 11, 13, 16, 20, ____, ____
   
b) Work out the difference between the 1st and the 6th term of the sequence.
   __________
   (2 marks)

3. Tania is asked to choose a number from the list: {11, 12, 13, 14, 15, 16, 17, 18, 19}
   
a) The prime numbers in the given list are: ____, ____, ____, ____.
   
b) Tania chooses a number.
   The probability that her number is prime is: ______
   (2 marks)

4. 80 persons are going out on a school outing.
   School transport can make use of minibuses and coaches.
   
a) Work out the number of minibuses and coaches needed for the outing, without having any empty seats left.
   Number of minibuses ______; Number of coaches ______
   
b) A minibus costs €30 while a coach costs €50.
   Work out the total cost for transport.
   € ______
   (3 marks)
5. **Translate** the rectangle by moving it 5 squares to the right and 2 squares down.

![Rectangle Diagram]

(1 mark)

6. Maria sat for two tests.
   In one of the tests she got 65.
   Her average is 70.

   From the answers given below, choose Maria’s mark in the **other** test.

   ![Marks: 68, 72, 75]

   Maria’s mark in the other test =

   (2 marks)

7. Triangle ABC is isosceles.

   ![Triangle Diagram]

   Angle C = _____ °
   Angle A = _____ °

   (3 marks)
8. Shop A and shop B have different offers on the same kind of shampoo.

\[
\begin{array}{|c|c|}
\hline
\text{SHOP A} & \text{SHOP B} \\
\text{SPECIAL OFFER} & \text{SPECIAL OFFER} \\
2 \text{ bottles for} & 3 \text{ bottles for} \\
\text{the price of} & \text{the price of} \\
€5.60 & €7.50 \\
\hline
\end{array}
\]

a) Work out the cost of one bottle of shampoo from shop A.

Cost = €

b) Work out the cost of one bottle of shampoo from shop B.

Cost = €

c) One bottle of shampoo from shop B costs _____ cent less than from shop A.

(3 marks)

9. Put the given shapes in the table below. The first one is done for you.

<table>
<thead>
<tr>
<th>Rectangle</th>
<th>Scalene Triangle</th>
<th>Square</th>
<th>Equilateral Triangle</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>REGULAR</strong></td>
<td><strong>Irregular</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>INTERIOR ANGLES ADD UP TO 180°</strong></td>
<td><strong>Equilateral Triangle</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>INTERIOR ANGLES ADD UP TO 360°</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(2 marks)

END OF PAPER
Instructions to Candidates

- Answer ALL questions.
- This paper carries a total of 80 marks.
- Calculators are allowed. Show all necessary working.

1. a) A car costs **fourteen thousand euro** to the nearest **one thousand euro**.
   
   Underline the actual value of the car from the following:

   €15,700  €14,600  €13,850

   b) Use arrows to **match** the calculations to their correct answer:

   \[
   \frac{1}{4} + \frac{1}{2} = 3.6
   \]

   40% of 20 = 0.75

   36 \div 10 = 8

   (4 marks)
2. a) Fill in:

\[ \frac{2}{3} + \square = 1 \]

b) Fill in:

\[ \square \frac{1}{8} - \frac{4}{8} = \frac{2}{8} \]

c) Fill in:

\[ \frac{1}{2} \times \square = 5 \]

(4 marks)

3. The following are all times on the same afternoon.

half past three 10.55 p.m. 14:40 quarter to five

a) Fill in the table with the above times.

<table>
<thead>
<tr>
<th>Alan</th>
<th>TIME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leaves school</td>
<td></td>
</tr>
<tr>
<td>Arrives home</td>
<td>half past three</td>
</tr>
<tr>
<td>Starts homework</td>
<td></td>
</tr>
<tr>
<td>Goes to sleep</td>
<td></td>
</tr>
</tbody>
</table>

b) How long does it take Alan to arrive home from school?

__________ minutes

c) What is Alan doing at eleven o’clock in the evening?

Alan is ___________________________

(6 marks)
4. A toymaker has a block of wood which measures: **20 cm by 12 cm by 8 cm**.

He wants to cut as many cubes, of side **2 cm**, as possible from this cuboid.

a) **How many** such cubes can he cut?

______ cubes

b) The toymaker can also cut cubes of side **4 cm**. Is it possible? Why?

_______ because ______________________________________________

______________________________________________________________

(5 marks)

5. Here is a number machine.

```
8  +2  10  x5  50
```

a) Here is a second number machine. Fill in the **missing numbers**.

```
-5  12  x4  2
```

b) Here is a third number machine. Fill in the **missing numbers** and **operations**.

```
90  ÷3  24  x5
```

(6 marks)
6. John chooses the points with coordinates \((-2, -1), (2, 1), (6, 3)\) and \((8, 4)\).

a) Underline the rule that describes the coordinates of the points.
   I. Adding the \(x\) and \(y\) coordinates of each point gives a total of 6.
   II. Subtracting 2 from the \(x\) coordinate gives the \(y\) coordinate.
   III. The \(x\) coordinate is double the \(y\) coordinate.

b) Plot the points \((-2, -1), (2, 1), (6, 3)\) and \((8, 4)\), on the graph below.

![Graph with points plotted]

(c) Join the points on your graph to form a straight line.

(d) Write down the coordinates of another point on the line.

\((____, ____ )\)

(e) The point \((x, 15)\) lies on the line. What is the value of \(x\)?

\(x = ____ \)

(f) Underline the correct equation of the line.

\[ y = 2x \quad \quad y = \frac{x}{2} \quad \quad y = x \]
7. The windfinder table below shows information about the weather forecast.

<table>
<thead>
<tr>
<th>WINDFINDER</th>
<th>Report</th>
<th>Forecast</th>
</tr>
</thead>
<tbody>
<tr>
<td>LUQA (MALTA)</td>
<td>Forecast 23/02/2014</td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>01:00 04:00 07:00 10:00 13:00 16:00 19:00 22:00</td>
<td></td>
</tr>
<tr>
<td>Wind speed (knots)</td>
<td>9 16 18 20 22 23 24 26</td>
<td></td>
</tr>
<tr>
<td>Wave height (m)</td>
<td>0.8 1.0 1.1 1.2 1.5 1.7 1.9 2.0</td>
<td></td>
</tr>
<tr>
<td>Wave period (s)</td>
<td>6 6 3 4 4 5 5 5</td>
<td></td>
</tr>
<tr>
<td>Air temperature (°C)</td>
<td>7 8 8 7 7 7 8 8</td>
<td></td>
</tr>
</tbody>
</table>

Use the table to answer the following questions:

a) At what time will wind speeds reach 23 knots?
   
   _____: _____

b) What is the mode for the wave period?
   
   ____ ____ s

c) Work out the mean air temperature.
   
   ____ ___ °C

d) Work out the range of the wave height.
   
   ____ ____ m

e) Work out the median wind speed.
   
   ____ ____ knots

f) Late in the afternoon, Alan decides to travel from Gozo to Malta in his small sailing boat.
   Give a reason why it might not be safe to do so.
   
   ______________________________________________________
   ______________________________________________________

(12 marks)
8. This is a **square** with sides 9 cm. The dots on each side of the square are **equally spaced**.
   a) Join two dots to divide the square into **two equal parts**.
   
   b) Work out the **area** of one of these parts.

   ________ cm²

   c) On the same square below, join two dots to divide the square into **two parts** in the ratio 1:2.

   d) **Shade** the **bigger area** and work out its **perimeter**.

   Perimeter = ________ cm

   (7 marks)

9. A **survey** was done to find out athletic students’ performance in a **long jump** contest. The chart below shows the results.

   a) Who **won** the contest?  

   b) How **long** is the distance jumped by Mark?

   ________ m

   c) How much did Paul jump **more than** John?

   ________ m

   d) Is it true that, **overall**, boys jumped a greater distance than girls? Explain.

   _______________ because ____________________________________________________________________

   _______________ because ____________________________________________________________________

   (6 marks)
10. The pie chart shows the **ingredients** needed to make a cake.

   a) The **percentage** of **flour** needed is about:

      40%  50%  90%

   b) What is the **angle** showing the amount of **eggs**?

      _____°

   c) 100 g of **butter** is used.

      i) The amount of **sugar** used is ______ g.

      ii) The amount of **flour** used is ______ g.

(6 marks)

11. The diagram shows a rectangular field divided into **two** parts A and B. The dimensions of the field are all in metres (m).

   a) **Underline** the correct answer:

      The **total** length of the field, in **m**, is:

      10w  10 + w  10 − w

   b) **Work out**:

      i) The **perimeter** of the whole field, in terms of w. **Simplify** your answer.

      ________ m

      ii) The area of part A.

      ________ m²

      iii) The area of part B, in terms of w.

      ________ m²

      iv) The **total area** of the field, in terms of w.

      ________ m²

(8 marks)
12. The table below shows the journeys that a taxi-driver made on one day.

<table>
<thead>
<tr>
<th>Journey</th>
<th>Number of Passengers</th>
<th>Distance</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>2</td>
<td>8 km</td>
<td>€12.50</td>
</tr>
<tr>
<td>B</td>
<td>3</td>
<td>12 km</td>
<td>€27.00</td>
</tr>
<tr>
<td>C</td>
<td>4</td>
<td>8 km</td>
<td>€16.00</td>
</tr>
<tr>
<td>D</td>
<td>3</td>
<td>24 km</td>
<td>€54.00</td>
</tr>
</tbody>
</table>

a) What is the total amount of money that the taxi-driver made on the day?

€__________

b) For journey B, what is the cost of the trip per km?

€__________ for every km

c) On journey D, the passengers shared the cost equally.
   How much did each passenger have to pay?

€__________ each

d) The more passengers there are, the cheaper is the cost per passenger for the trip.
   Is this statement true? Give a reason for your answer or show your working.
   ________________ because ____________________________
   ________________ because ____________________________
   ________________ because ____________________________
   ________________ because ____________________________
   ________________ because ____________________________

(8 marks)

END OF PAPER