Annual Examinations for Secondary Schools 2014

FORM 1 MATHEMATICS
Non Calculator Paper

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<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mark</td>
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</tbody>
</table>

DO NOT WRITE ABOVE THIS LINE

Name: ____________________________  Class: ____________

Instructions to Candidates

- Answer all questions.
- This paper carries a total of 25 marks.
- Calculators and protractors are NOT ALLOWED.
1. Work out:

   a) $12.4 + \underline{46.5}$  
   
   Ans: a) ______

   b) $79 - 4 \times 10$

   Ans: b) ______

   (3 marks)

2. A school is gathering cans for a recycling competition. Manuel, Gabriel, Tony and Sylvan each bring some cans from home.

   Manuel  Gabriel  Tony  Sylvan

   ![](cans.png)

   11 cans  9 cans  15 cans  13 cans

   and Sylvan each bring some cans from home.

   a) How many **cans in all** did the boys bring to school?
b) The cans are put in 4 boxes. The same number of cans is put in each box. How many cans are put in each box?

_______ cans in each box  
(4 marks)

Name: __________________________ Class: _____________

3. a) Draw a line 7.5 cm long.

b) Underline the correct estimate of angle P.

i) 160°   ii) 65°   iii) 125°

(2 marks)
4. a) What is the cat’s weight in kilograms?

________ kg

b) Change your answer to grams.

________ g

(3 marks)

5. Kay and Gary take turns to spin the pointer on this spinner. They gain or lose points according to where the pointer lands.

a) Kay spins the spinner 3 times.

The pointer lands once on -1 and twice on +3. How many points does Kay get?
b) Gary also spins the spinner 3 times. The pointer lands on **three different** parts of the spinner. Gary gets a total of **2 points**.

The pointer lands on \(+1\) first. Where does the pointer land on the next two spins?

The pointer lands on:

\[+1, \quad \square \text{ and } \square\]  

(4 marks)

6. Kim makes **100 grams** of snack mixture made up of raisins, banana chips and peanuts.

a) **35%** of the snack mixture is raisins.

   How many grams of raisins does Kim use?

   _____ g raisins

b) \(\frac{1}{5}\) of the snack mixture is banana chips.

   How many grams of banana chips does Kim use?
c) The rest of the snack mixture is peanuts.
   How many grams of peanuts does Kim use?

   ____ g peanuts
   (5 marks)

7. Use the number cards above to fill in the missing numbers below.
   Each number card is used only once.

   a) ____ + ____ = 62
b) 0 - 31 = 49 = 

(4 marks)

END OF NON CALCULATOR PAPER
1. a) What is the value of the digit 7 in the number 9745? ______________

b) Fill in the missing numbers:
   i) 47, 44, _____, 38, 35.
   ii) 7.2, 7.4, 7.6, 7.8, ______.

c) Round:
   i) 85 to the nearest 10: ______
   ii) 449 to the nearest 100: ______

(5 marks)
2. a) i) Arrow A is pointing at ______.
   ii) Mark with an arrow the number −6.

b) i) The next **odd number after** 27 is ______.
   ii) A **square number** between 20 and 30 is ______.
   iii) A **factor of 24** between 10 and 20 is ______.

c) Put these numbers in order, **largest first**. The first one has been done for you.

   12, −5, 7, 29, 0

   29 [ ] [ ] [ ] [ ] [ ]

   (7 marks)

3. a) Using a protractor, draw an **angle of 65°** at V.

   V

b) The diagram shows a **straight line ST**.

   i) The angle on a straight line is ______°.

   (4 marks)
4. **Underline the odd one out.** The first one has been done for you.

   a) This shape has **three sides**.
      
      isosceles triangle  square  scalene triangle

   b) This shape is a **2D shape**.
      
      cube  circle  square

   c) **Parts of a circle**.
      
      centre  radius  breadth

   d) A **quadrilateral**.
      
      square  rectangle  equilateral triangle

   (3 marks)

5. Leanne wants to buy some souvenirs for her friends. She buys snow globes costing €3.50 each. The shopkeeper charges €2 for the wrapping.

   a) Complete this formula to find the total cost of the snow globes and wrapping.
      
      Total cost (in euro) = $\Box \text{€} \times \text{Number of friends} + \Box \text{€}$

   b) If Leanne has **7 friends**, how much does she pay for the souvenirs and wrapping?

      €__________

      (5 marks)
6. a) Find the **perimeter** of the shape X.

    ________ cm

b) Each cube in solid Y has a **volume of 1 cm\(^3\)**.

    The **volume** of the shape Y is ______ cm\(^3\).

    (4 marks)

7. a) Fill in the table using the shapes below. One shape has been done for you.

<table>
<thead>
<tr>
<th>Quadrilateral</th>
<th>Not a Quadrilateral</th>
</tr>
</thead>
<tbody>
<tr>
<td>All sides are equal</td>
<td></td>
</tr>
<tr>
<td>Not all sides are equal</td>
<td>A</td>
</tr>
</tbody>
</table>

b) **Complete:**

    The shape with the **biggest area** is shape _________.

    (5 marks)
8. The spinner below is divided in 12 equal parts. It has the numbers 1 to 5 on it.

a) Use the words in the box below to describe the probability that the following events occur.

<table>
<thead>
<tr>
<th>certain</th>
<th>likely</th>
<th>unlikely</th>
<th>impossible</th>
</tr>
</thead>
</table>

i) The arrow points at an **odd number**.

i) The arrow points at the **number 8**.

b) Sandro thinks that it is **unlikely** that the arrow points at an **even number**.

Is Sandro correct? Why?
9. a) Sue has a 2 litre bottle of water. She fills two 250 ml glasses and one 450 ml glass. How much water is left in the bottle? Give your answer in ml.

______ ml left

b) The diagram below shows a scale drawing of a playing field.

Scale: 1 cm to 5 m

i) Measure the distance of the swing from the tree. ________ cm

ii) What is the real distance of the swing from the tree?

_______ m

(6 marks)
10. a) Match.

<table>
<thead>
<tr>
<th>Cube</th>
<th>Cylinder</th>
<th>Pyramid</th>
<th>Cuboid</th>
</tr>
</thead>
</table>

b) Tick ✓ True or False.

i) Solid A has **12 edges**.
   - True [ ] False [ ]

ii) Solid B has **5 vertices**.
   - True [ ] False [ ]

iii) Solid C has **3 faces**.
   - True [ ] False [ ]

c) This is the net of one of the solids seen above.

This net makes solid ____________.

(7 marks)
11. The bar line graph below shows the UV index for a week in April.

a) On Sunday, the UV index was 6. **Complete** the bar line graph to show this information.

b) Which **days of the week** had a UV index of **7 or more**?

_________________________ and ________________________.

c) The **highest UV index** for the week was ________.

d) Work out the **mean** UV index for the **whole week**. Give your answer as a **whole number**.

Mean: __________

(7 marks)
12. The students in a Form 1 class were asked which amusement park in Europe they preferred. The pictogram below shows their preferences.

<table>
<thead>
<tr>
<th>Park</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Europa Theme Park</td>
<td>😊😊</td>
</tr>
<tr>
<td>Disneyland Paris</td>
<td>😊😊😊😊😊</td>
</tr>
<tr>
<td>Port Aventura</td>
<td>😊😊😊</td>
</tr>
<tr>
<td>Gardaland</td>
<td>😊😊</td>
</tr>
<tr>
<td>Parc Astérix</td>
<td></td>
</tr>
</tbody>
</table>

**KEY:** 😊 stands for 2 students

a) **3 students** from the class said that they prefer Parc Astérix.

Fill in the pictogram to show this information.

b) How many **students** are there in the Form 1 class?

__________ students

c) Which park did the students prefer **best**?

________________________

d) What **fraction** of the students chose Port Aventura?

Give your answer in its lowest terms.

Ans: __________

(6 marks)
13. The table shows part of the Topaz Airlines schedule starting 1st April 2014.

<table>
<thead>
<tr>
<th>Departure Time</th>
<th>Destination</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:20 p.m.</td>
<td>Valencia</td>
</tr>
<tr>
<td>1:30 p.m.</td>
<td>Rome</td>
</tr>
<tr>
<td>2:05 p.m.</td>
<td>London</td>
</tr>
<tr>
<td>_____ p.m.</td>
<td>Riga</td>
</tr>
<tr>
<td>4:27 p.m.</td>
<td>Marseille</td>
</tr>
</tbody>
</table>

a) The plane for Riga leaves **an hour after** the plane for London. At what time does it leave?

___________ p.m.

b) The plane for Rome leaves at **1:30 p.m.** Write this time **in words**.

____________________________________________________ in the afternoon.

c) **Underline** the correct answer.

i) The plane for Valencia leaves at 1:20 p.m.
   
   Using 24-hour clock, this time is written as (01:20, 11:20, 13:20).

   

ii) The timetable is valid for **two months**. In which month will the timetable change?

   (February, May, June).

   (6 marks)
14. a) Use the number machine below to answer these questions.

![Number Machine Diagram]

i) Find the **output** in this number machine. Ans: __________

ii) Write the **rule in words**.

_______________________________________________________

b) On the grid below:

i) **Plot** the point (0, 2). Label the point B.

ii) **Draw a line** passing through the points A, B and C.

iii) Write the coordinates of another point on the line ABC.

Point on line = (   ,   ).

![Graph with Points A, B, and C]