

**FORM 1**

**MATHEMATICS**  
**Non Calculator Paper**

**TIME: 30 minutes**

| Question | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | Total |
|----------|---|---|---|---|---|---|---|---|-------|
| Mark     |   |   |   |   |   |   |   |   |       |

**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. a) What is one fifth of €0.40?

Ans: \_\_\_\_\_

- b) Fill in:  $20 - 4 = 4 \times (2 + \square)$

- c) By looking at the following calculations, state which of them **must** be **wrong**.

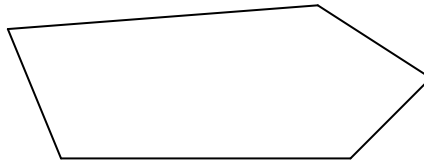
(i)  $53 \times 44 = 2332$

(ii)  $36 \times 23 = 882$

(iii)  $85 \times 25 = 2125$

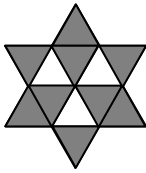
Ans: \_\_\_\_\_

- d) Mark the **acute** angles.



(4 marks)

2. a) Express as a **fraction** and as a **decimal**.



$$\frac{\text{Number of shaded triangles}}{\text{Whole number of small triangles}} = \frac{\boxed{\phantom{0}}}{\boxed{\phantom{0}}} = \underline{\phantom{0}}.\underline{\phantom{0}}$$

- b) **Circle** the only set of numbers which has three **equal** values.

(i)  $\frac{2}{5}$     40%    0.4

(ii)  $\frac{1}{4}$     25%    0.14

(iii)  $\frac{3}{4}$     34%    0.74

(iv)  $\frac{7}{10}$     7%    0.7

(3 marks)

3. a) Maria has €15 to spend on peanuts.  
How many bags of peanuts can she buy?

peanuts  
€1.35



Ans: \_\_\_\_\_ bags

bird seeds  
€4.85



bird feeder  
€8.95



b) Rhys has €50.

He wants to buy a bird feeder and 10 bags of bird seed.

How much **more** money does he need?

Ans: €\_\_\_\_\_ more

(3 marks)

4. Complete the patterns.

a) 8, 5, 2, -1, \_\_\_\_.

b) €\_\_\_\_, €2.05, €2.45, €2.85, €3.25.

(2 marks)

5. Fill in the number cards to make correct calculations.

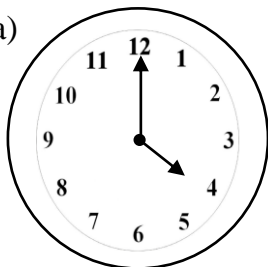
a)  $\boxed{-1} + \boxed{\phantom{00}} = \boxed{-3}$

b)  $\boxed{4} - \boxed{-4} = \boxed{\phantom{00}}$

c)  $\boxed{(-2)^3} = \boxed{\phantom{00}}$

(3 marks)

6. a)

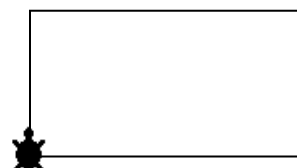


What is the **obtuse** angle between the hands of the clock at exactly 4 o'clock?

Ans: \_\_\_\_\_°

b) Complete the logo commands to draw a rectangle with a **perimeter** of 200 turtle steps.

PD REPEAT 2 [FD 40 RT 90 FD \_\_\_\_ RT 90]



(3 marks)

7. A teacher asked a group of girls in a school about their reading habits. He gathered the following information:

9 girls read 1 book or none per week.

5 girls read exactly 2 books per week.

6 girls read 3 books or more per week.

- a) What **fraction** of the girls read at least 3 books per week?

Ans: \_\_\_\_\_

- b) Express the above answer as a **percentage**.

Ans: \_\_\_\_\_ %

(2 marks)

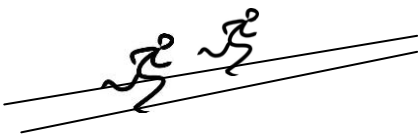
- 
8. a) A packet of cereal weighs 375 g. What is the weight of **ten** such packets, in **kilograms**?

Ans: \_\_\_\_\_ kg

- b) Anna buys a 2 litre bottle of water. She pours 0.5 litres in a beaker and drinks 200 ml from the bottle. How much water is **left** in the bottle?

Ans: \_\_\_\_\_

- c) During a School Sports Day, at a certain point Ben is 750m away from the starting point while Mario is 1 km away. If Ben is **half** way in the race, what distance does Mario still have to run to finish the race?



Ans: \_\_\_\_\_

(5 marks)

FORM 1

MATHEMATICS

TIME: 1h 30min

Main Paper

| Question | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | Total<br>Main | Non<br>Calc | Global<br>Mark |
|----------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|---------------|-------------|----------------|
| Mark     |   |   |   |   |   |   |   |   |   |    |    |    |    |    |               |             |                |

DO NOT WRITE ABOVE THIS LINE.

Name: \_\_\_\_\_

Class: \_\_\_\_\_

CALCULATORS ARE ALLOWED BUT ALL NECESSARY WORKING MUST BE SHOWN.  
 ANSWER ALL QUESTIONS.

1. a) Write thirty five thousand and seventy six in figures.

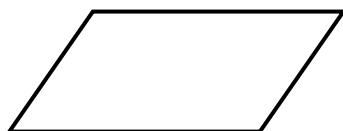
\_\_\_\_\_

- b) Fill in and then write as a power of ten:

$$5^3 \times 2^3 = \boxed{\phantom{000000}} = 10^{\boxed{\phantom{00}}}$$

(3 marks)

2.



The shape is a quadrilateral. Tick (✓) the **correct** statements.

- a) It is a parallelogram.  
 b) It has line symmetry.  
 c) It is an irregular polygon.  
 d) Its opposite angles are equal.  
 e) Its diagonals are equal.

|   |
|---|
| ✓ |
|   |
|   |
|   |
|   |

(2 marks)

3. This is a picture of Reno's new car.



- a) Measure the length of the car in the picture, correct to the nearest mm.

Ans: \_\_\_\_\_ mm

The real car length is 4.50 m.

- b) Work out the **scale** in its **simplest** form.

Length of car in picture : Length of real car

Ans: \_\_\_\_\_ : \_\_\_\_\_

(3 marks)

4. Fill in the spaces to complete the following number machines. Then write the **rule**.

a)

| Input<br>( $x$ ) | Output<br>( $y$ ) |
|------------------|-------------------|
| 1                | 3                 |
| 2                | 6                 |
| 3                | 9                 |
| 4                |                   |
| 5                | 15                |

b)

| Input<br>( $p$ ) | Output<br>( $q$ ) |
|------------------|-------------------|
| 1                | 5                 |
| 2                | 8                 |
| 3                | 11                |
| 4                |                   |
| 5                | 17                |

Rule:  $y =$  \_\_\_\_\_

Rule:  $q =$  \_\_\_\_\_

(4 marks)

Name: \_\_\_\_\_

Class: \_\_\_\_\_

ELS

5. The following table shows the ages of 12 children at the playing field at noon last Sunday.

|    |    |   |    |    |   |
|----|----|---|----|----|---|
| 5  | 10 | 8 | 11 | 8  | 5 |
| 12 | 8  | 9 | 10 | 11 | 9 |

- a) Find the **median** age of the data.

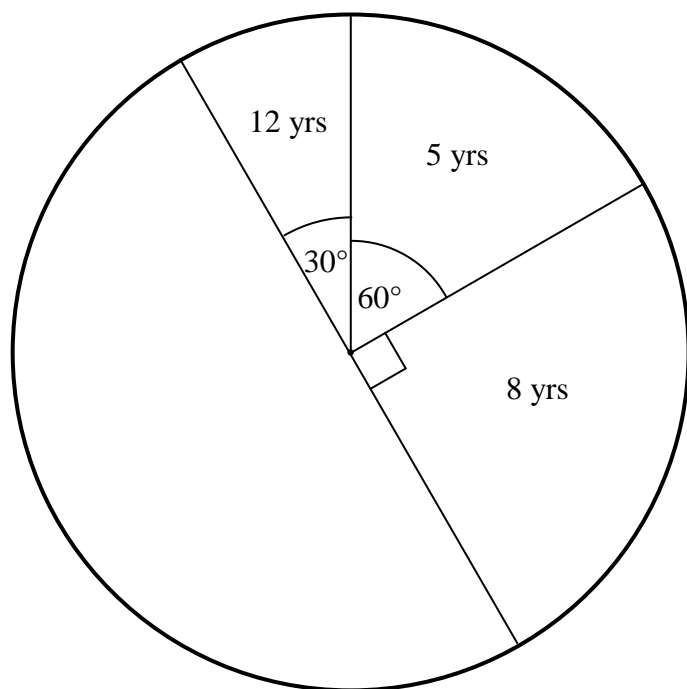
\_\_\_\_\_

- b) Work out the **mean** age correct to 1 decimal place.

\_\_\_\_\_

- c) Complete the **frequency table** for the above data and then complete and label the **pie chart**.

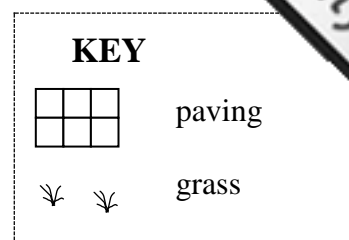
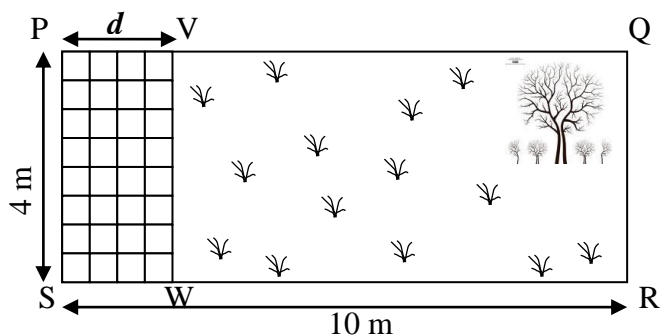
| Age   | Frequency |
|-------|-----------|
| 5     | 2         |
| 6     | 0         |
| 7     | 0         |
| 8     | 3         |
| 9     |           |
| 10    |           |
| 11    |           |
| 12    | 1         |
| Total | 12        |



- d) What is the **mode**? \_\_\_\_\_

(9 marks)

6. a) Raymond's rectangular garden has **paving** on one side. The rest is grass.



- (i) What is the **perimeter** of the whole garden PQRS?

Ans: \_\_\_\_\_ m

- (ii) What is the value of  $d$  if the tiles are squares of side 50 cm? Give answer in metres.

Ans: \_\_\_\_\_ m

- (iii) Calculate the **area** of VQRW.

Ans: \_\_\_\_\_  $\text{m}^2$

- b) Raymond digs a pond 2 m long, 1.5 m wide and 1 m deep. What is the volume of the water if the pond is filled to the top? (The pond is in the form of a cuboid.)

Ans: \_\_\_\_\_  $\text{m}^3$

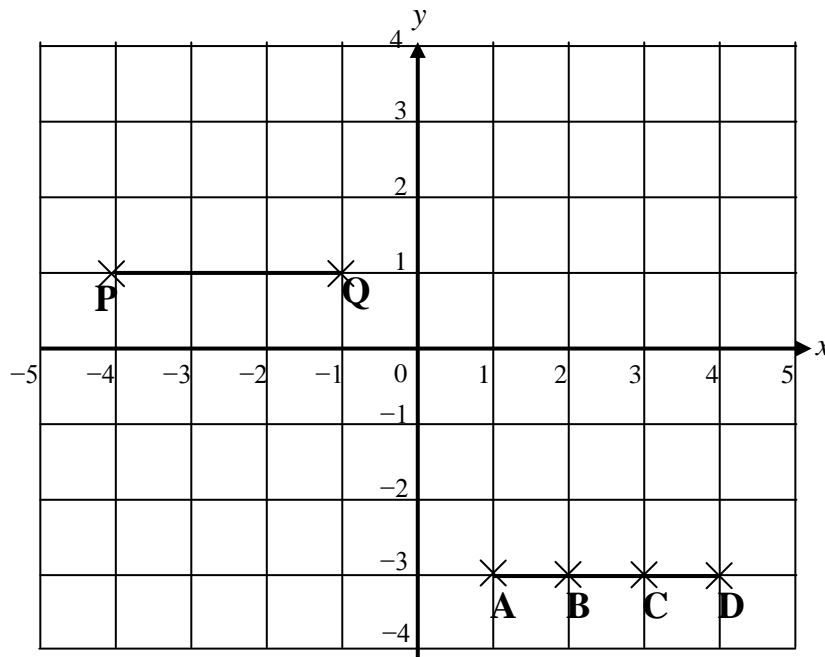
(8 marks)



Name: \_\_\_\_\_

Class: \_\_\_\_\_

7.



- a) (i) Write the coordinates of P ( , ) and Q ( , ).
- (ii) Plot point R ( - 2, 3) and join PQR to form a triangle.
- (iii) **Reflect** triangle PQR in the **x axis**. Label it P'Q'R'.
- (iv) **Translate** triangle PQR **5 right** and **2 down**. Label it P''Q''R''.

b) **Underline** the correct equation below:

Points A, B, C and D on the grid shown lie on the line with equation:

$y = -3$

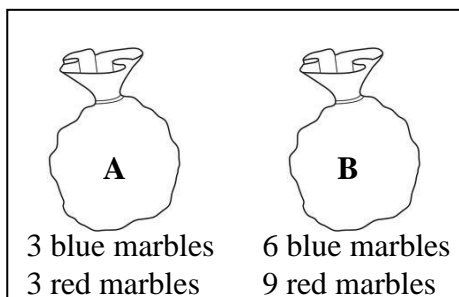
$y = 3x$

$x = -3$

$y = x - 3$

(8 marks)

8.



- a) Darren chooses a marble from bag A and another marble from bag B without looking.
- (i) The probability of picking a **blue** marble from **bag A** is \_\_\_\_\_
- (ii) The probability of picking a **blue** marble from **bag B** is \_\_\_\_\_

(iii) Is Darren **more likely** to pick a blue marble from bag A or bag B?

Ans: Bag \_\_\_\_\_

b) (i) Evaluate:  $13^2 =$

(ii) Write 3 **square numbers** which round to **200 correct to the nearest 100**.

$\approx 200$

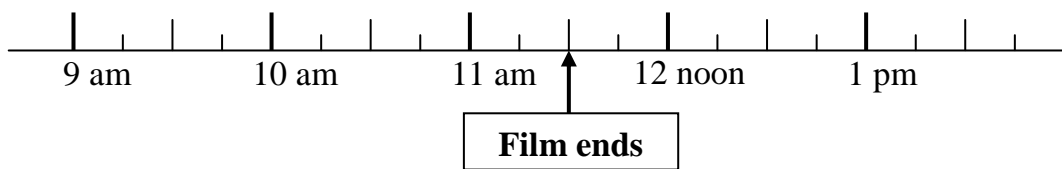
$\approx 200$

$\approx 200$

Ans: \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

(6 marks)

9. Leo and his sister watched an action movie.



a) The movie was 2 hours and 15 minutes long.

**Mark** on the time line, the time when the film **started**.

b) **After** the film, they played **football** in the backyard.

When they came in from playing football, it was 1.05 pm.

Write this time using 24-hour clock. \_\_\_\_\_

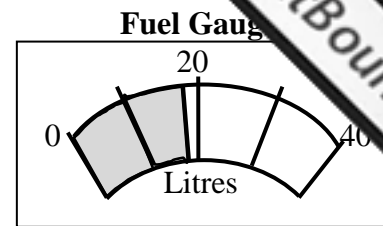
c) How long did they play football?

Ans: \_\_\_\_\_ h \_\_\_\_\_ min

(3 marks)

10. a) According to this fuel gauge, **about** how many litres of fuel are in the tank?

Ans: \_\_\_\_\_ litres



b)

**Recipe**

10 strawberries  
 $\frac{1}{2}$  litre orange juice  
 250 ml yogurt  
 1 banana

Makes **2** smoothies



- (i) Express in its **simplest** form.

orange juice: yogurt

Ans: \_\_\_\_ : \_\_\_\_

Silvia uses the recipe to make smoothies. She uses **1 litre** of yogurt.

- (ii) How many **strawberries** does she need?

Ans: \_\_\_\_\_ strawberries

Aaron uses the same recipe. He wants to make 5 smoothies.

He has 1 litre of orange juice.

- (iii) How many **more** millilitres of orange juice does he need?

Ans: \_\_\_\_\_ more millilitres of orange juice

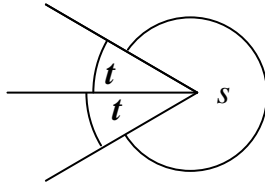
(6 marks)

11. a) If  $x = 4$  and  $y = 10$  find the value of:

$$\frac{2(x+1)}{y} =$$

Ans: \_\_\_\_\_

- b) The value of each  $t$  in the diagram is  $21^\circ$ . Work out the value of  $s$ .



Ans:  $s = \underline{\hspace{2cm}}^\circ$

(4 marks)

12. Luke had 14 points and **lost**  $x$  points during a game.

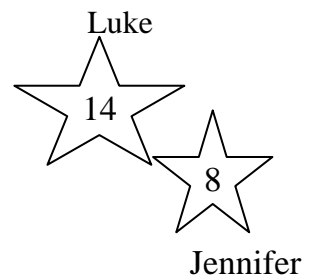
- a) Write this as an expression in  $x$ .

\_\_\_\_\_

Jennifer started with 8 points and **won**  $x$  points.

- b) Write this as an expression in  $x$ .

\_\_\_\_\_



They noticed that then they each had the **same** number of points.

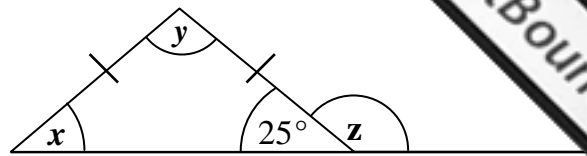
- c) Form an equation in  $x$  and solve it.

Ans:  $x = \underline{\hspace{2cm}}$

(5 marks)

13. a) Find

(i) the value of the exterior angle  $z$



Ans:  $z = \underline{\hspace{2cm}}^\circ$

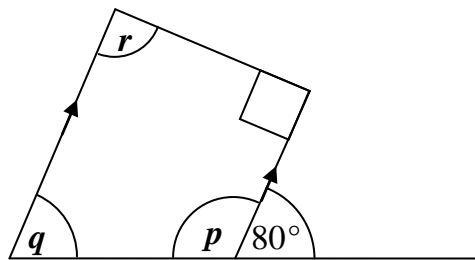
(ii) the value of  $(x + y)$

Ans:  $(x + y) = \underline{\hspace{2cm}}^\circ$

(iii) What can you deduce from the above answers?

\_\_\_\_\_

b) Find the value of  $p$ ,  $q$  and  $r$ , giving reasons.



Ans:  $p = \underline{\hspace{2cm}}^\circ$  (*reasons* \_\_\_\_\_)

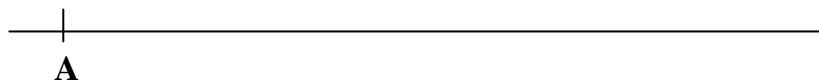
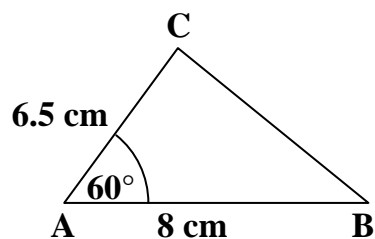
Ans:  $q = \underline{\hspace{2cm}}^\circ$  (\_\_\_\_\_)

Ans:  $r = \underline{\hspace{2cm}}^\circ$  (\_\_\_\_\_)

*Space for working if required.*

(9 marks)

14. a) Use ruler and compasses **only** to make an accurately, labelled drawing triangle shown, starting from the given line below.



- b) Measure (i) angle B correct to the **nearest degree**

Angle B = \_\_\_\_\_

- (ii) side BC correct to the **nearest mm**.

side BC = \_\_\_\_\_

(5 marks)