C

FORM 3   **MATHEMATICS SCHEME C**   **TIME: 30 minutes**
Non Calculator Paper

Name: _____   **Class: _____**

Question	1	2	3	4	5	6	7	8	9	Total
Mark										

INSTRUCTIONS TO CANDIDATES

- **Answer all questions.**

- **This paper carries a total of 25 marks.**

- **Calculators and protractors are NOT ALLOWED.**

1 Angle **q** = _____°

250°

q
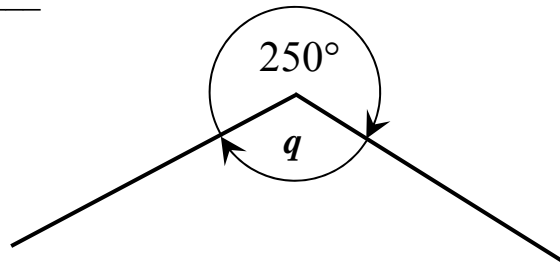
2 Fill in.

a) 3 hours = _____ minutes

b) _____ *litres* = 5000 *ml*

3 Fill in.

25% of €80 = €_____

4 Complete this **multiplication grid**.

×	75	4.2
10		42
100	7500	

5 The table shows the **test marks** of 5 students.

Name	Mark
Bertu	7
Ġorġ	5
Anna	5
Toni	4
Mari	9

a) **Median** = _____

b) Work out the **mean (average)** mark.

Mean (average) = _____

(3 marks)

6 a) Work out.

$$100 - 30 \times 3 = \underline{\hspace{2cm}}$$

b) A car travels **240 km** in **4 hours**. Work out the **speed** of the car.

Speed = _____ km/h

(3 marks)

7 Fill in.

a) $\dfrac{5}{8} - \dfrac{3}{8} = \dfrac{}{8} = \dfrac{}{4}$

b) $\dfrac{3}{10} + \dfrac{1}{5} = \dfrac{3}{10} + \dfrac{}{10} = \dfrac{}{10} = \dfrac{1}{}$

(4 marks)

8   a)   This LOGO statement draws a **rectangle**.

PD REPEAT 2 [FD 200 RT 90 FD 120 RT 90]

Work out the **perimeter** of this **rectangle**.

Perimeter = _____ turtle steps

b)   The **area** of the rectangle is **30 cm^2**.
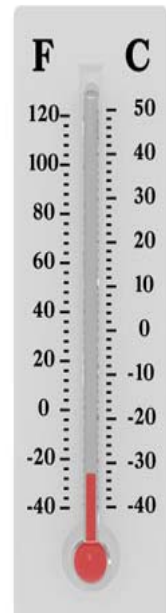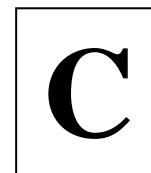Work out the **length** of this rectangle.

5 cm

Length = _____ cm

(4 marks)

9   Complete the table.

	Temperature (°C)	Goes	New Temperature (°C)
a	5	**down** 8°C	−3
b	10	**down** 5°C	
c	−3	**up** 10°C	
d	−6	**up** 4°C	
e	−3		−5

F   C

120— : 50
100 : 40
80 : 30
  : 20
60 : 10
40 : 0
20 : -10
0 : -20
-20 : -30
-40 : -40

(4 marks)

C

FORM 3 **MATHEMATICS** **TIME: 1h 30min**
Main Paper

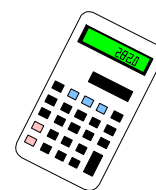| 1	2	3	4	5	6	7	8	9	10	11	12	13	14	NC	Main	Total

Name: _____ **Class:** _____

> **Calculators are allowed but the necessary working must be shown.**
> **Answer all questions.**

1 Use your **calculator** to **divide 200** by **3**. Write your answer correct to

a) the **nearest whole number** _____

b) **two decimal places** _____

(2 marks)

2 a) Use your **ruler** to find the **length** of this pencil.
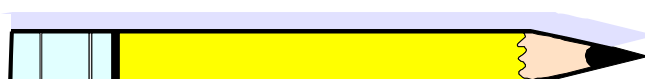
Length = _____ cm

b) **When new**, the pencil was **double** the length it is now. Work out the length of the pencil when it was new.

Length = _____ cm

(3 marks)

3 a) Fill in.

$$\frac{3}{4} = \underline{\hspace{2cm}} \%$$

b) A dress costs **€125**.
Work out the **SALE price**.

Sale price = €_____

<div align="right">(4 marks)</div>

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4 a) **Underline** the correct answer.

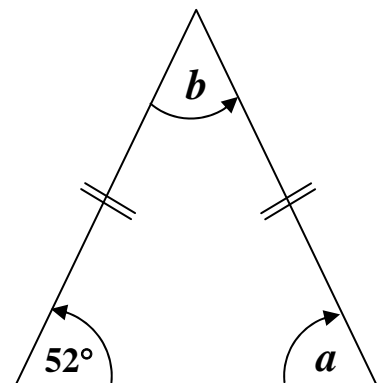   i) The sum of the **three angles of a triangle** is (**90°, 180°, 360°**).

   ii) A **hexagon** has (**6, 8, 10**) sides.

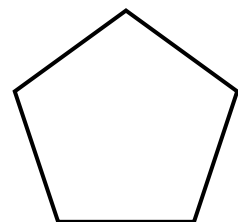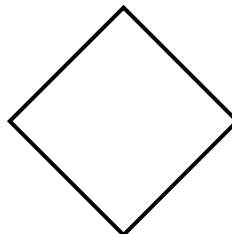b) The diagram shows an **isosceles triangle**.

   Fill in.

   a = _____ °

   b = _____ °

<div align="right">(4 marks)</div>

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5 Write the correct name. Use the words below.
SQUARE, PENTAGON, HEXAGON, OCTAGON

_____   _____   _____   _____

<div align="right">(4 marks)</div>

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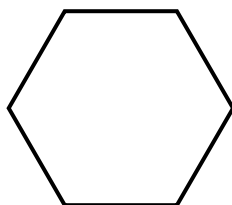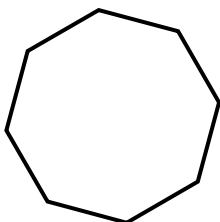
6   Match the **equation** to its **solution**.

	Equation
a	$x + 6 = 10$
b	$x - 7 = 2$
c	$3x = 15$
d	$x \div 2 = 5$
e	$5x - 2 = 3$

Solution
$x = 10$
$x = 4$
$x = 9$
$x = 1$
$x = 5$

(4 marks)

7   Match the **event** to the **probability**.

Event
When you throw a fair coin you get a HEAD.
It will be a school holiday on Christmas day.
When I grow up I will be 10 metres tall.
It will rain in summer in Malta.
England will beat Malta in football.

Probability
impossible
unlikely
evens
likely
certain

(4 marks)

8   a)   Use **ruler and compasses only** to draw an **equilateral triangle** with sides **6 cm**.

   b)   Fill in.
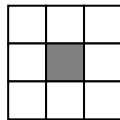
        Each angle of this triangle = _____°

_____
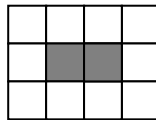
(4 marks)

9 a) Write down the **missing numbers**.

   i) **4, 8, 12, 16, _____, 24, 28, _____**
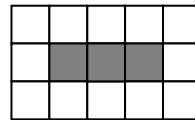
   ii) **64, 32, 16, 8, _____, 2, 1, _____**

   b) i) Draw **Pattern 4**.

   Pattern 1   Pattern 2   Pattern 3   Pattern 4

   ii) Fill in.
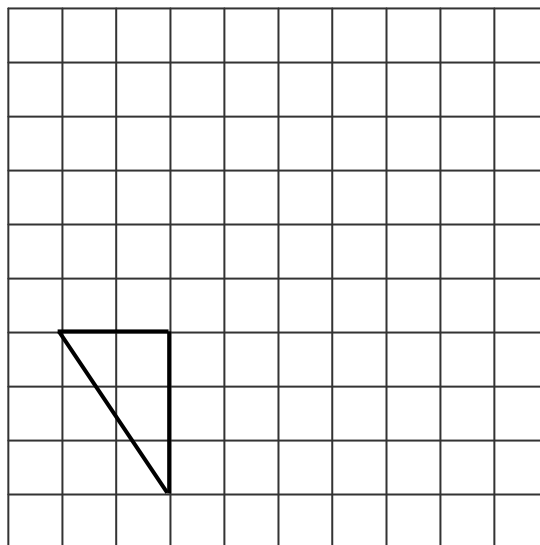
   In **Pattern 10** there are _____ **shaded squares** and _____ **white squares**.

                                                                      (8 marks)

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10 a) **Enlarge** the triangle. Use a ratio of **1 : 3**.
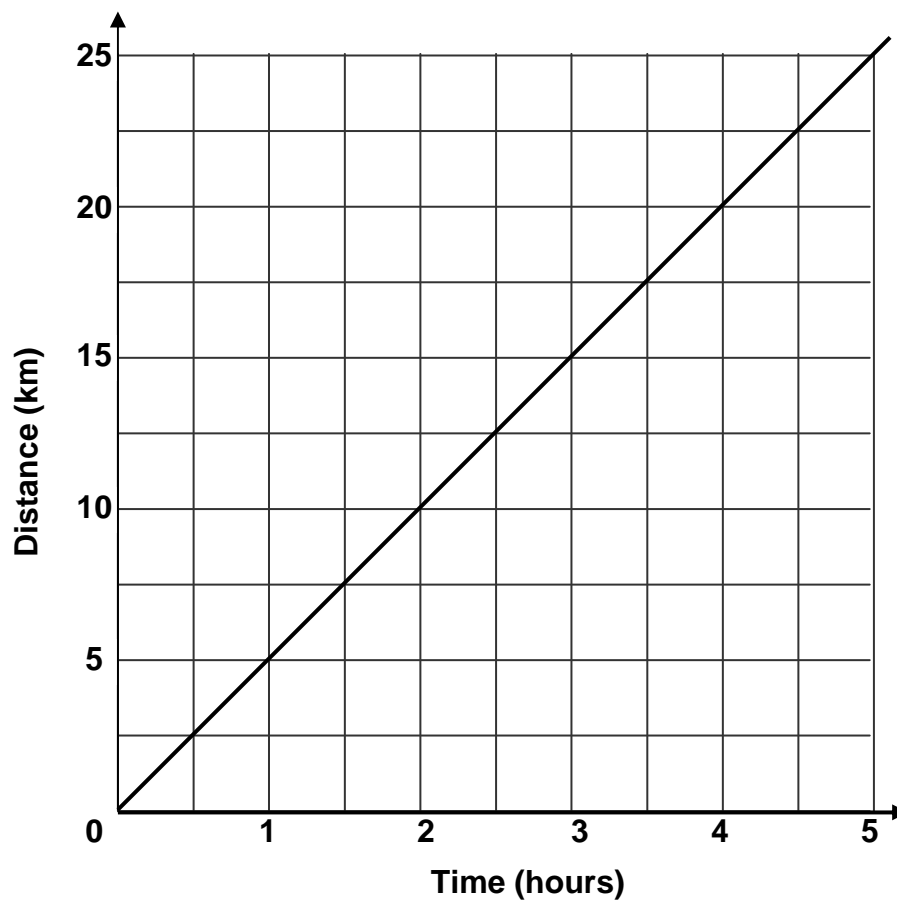
   b) Fill in.

   i) **Area of small triangle** = _____ cm^2

   ii) **Area of enlarged triangle** = _____ cm^2

   iii) **Area of small triangle : Area of enlarged triangle** = 1 **:** _____

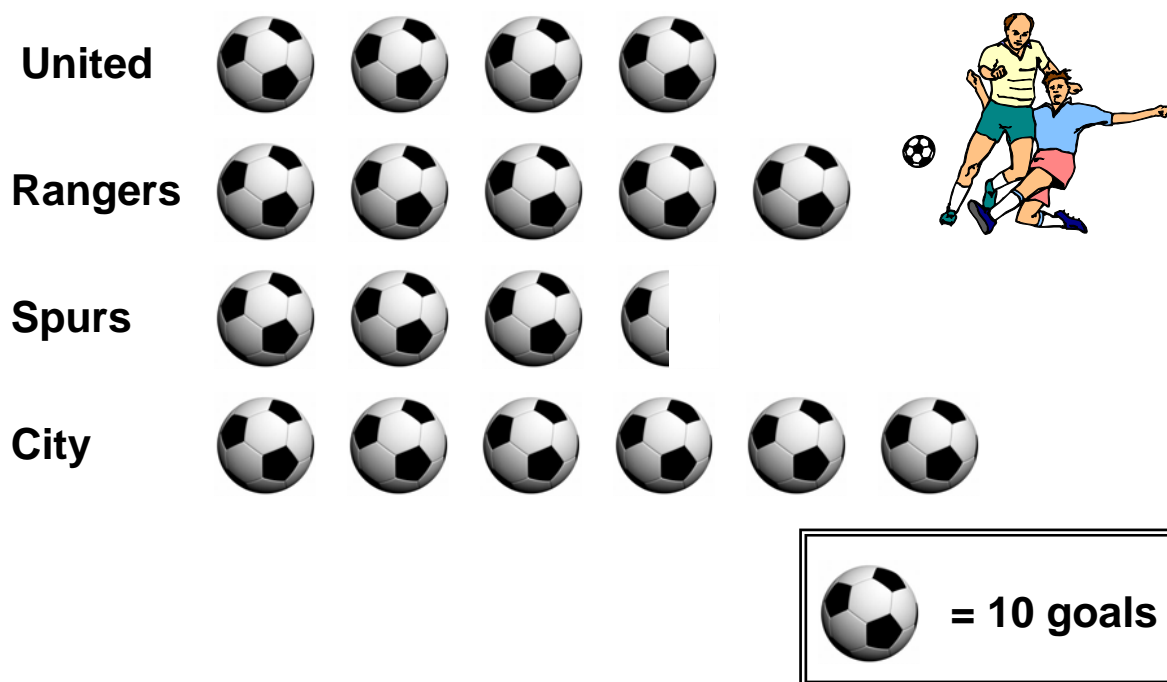   (7 marks)

11 This graph shows the distance a boy walks in a given time.

a) Use this graph to fill in.

    i) In **3 hours** the boy walks _____ kilometres.

    ii) In _____ hours the boy walks **20 km**.

    iii) In **2$\frac{1}{2}$ hours** the boy walks _____ kilometres.

    iv) In _____ hours the boy walks **40 km**.

b) **Speed** = _____ km/h

(7 marks)

12 The **pictogram** shows the **number of goals** scored by four teams.

United ⚽ ⚽ ⚽ ⚽

Rangers ⚽ ⚽ ⚽ ⚽ ⚽

Spurs ⚽ ⚽ ⚽ ⚽

City ⚽ ⚽ ⚽ ⚽ ⚽ ⚽

⚽ **= 10 goals**

a) **Underline** the correct answer.

   i)   (United, Rangers, Spurs, City) scored **most goals**.

   ii)   Rangers scored (5, 10, 25, 50) goals.

   iii) (United, Rangers, Spurs, City) scored 40 goals.

   iv)   Spurs scored (10, 30, 35, 40) goals.

b) i)   How many goals did **City** score? _____ goals

   ii)   City played **20 matches**. Work out the mean (**average**) number of goals scored per match.
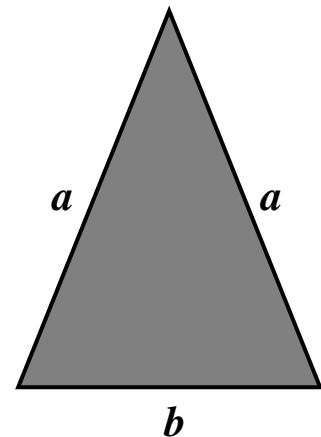
         Average = _____ goals

(7 marks)

13 a) Underline the correct answer.

A triangle with **no equal sides** is (**scalene, equilateral, isosceles**).
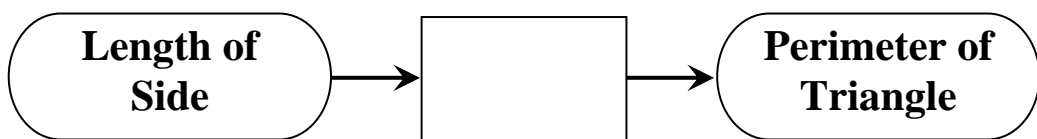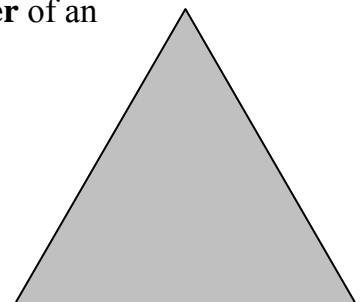
b) Mario uses the formula

$$Perimeter = 2a + b$$

to find the **perimeter** of an **isosceles triangle**.

a   *a*

b

Complete the table.

a	*b*	Perimeter
7	5	
	4	22

c) Katrina uses this number machine to find the **perimeter** of an **equilateral triangle**.
Complete the number machine.

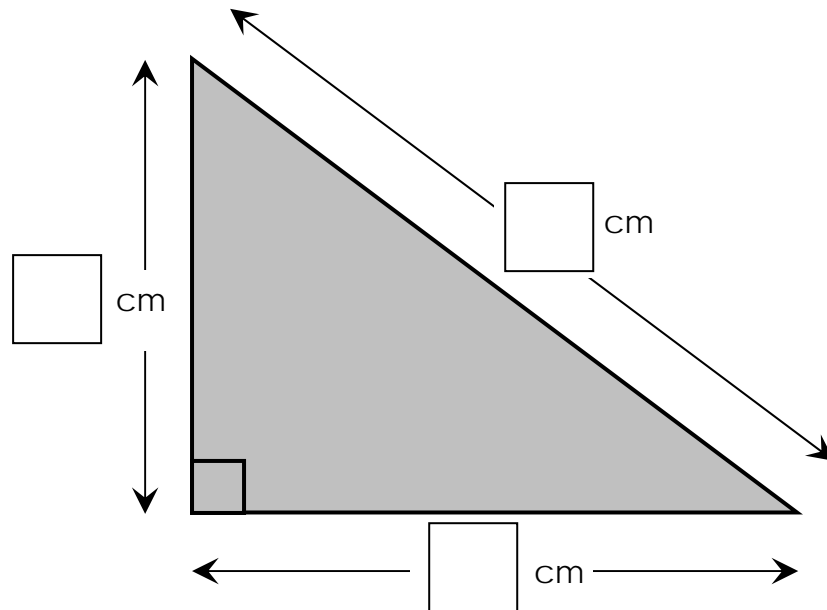| **Length of Side** | → | | → | **Perimeter of Triangle** |

d) The **perimeter** of an equilateral triangle is 27 cm. Work out the length of **one of its sides**.

Length = _____ cm
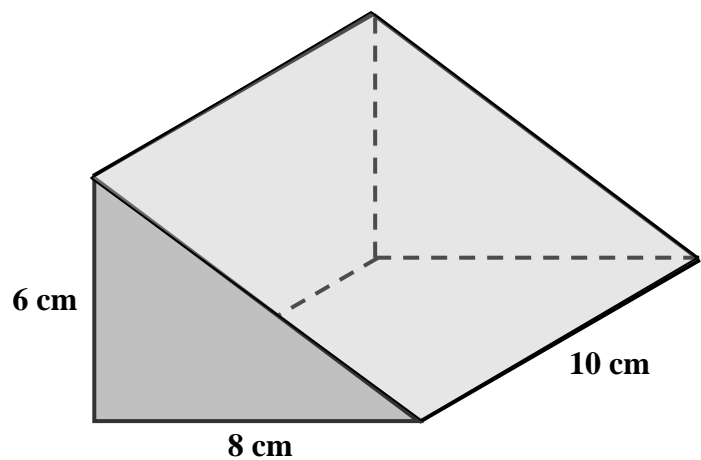
(8 marks)

14 a) **Measure** the **sides** of the **triangle**.
Fill in the missing measurements.

b) Work out the **perimeter** and **area** of the **triangle**.

Perimeter = _____ cm   **Area** = _____ cm^2

c) Work out the **volume** of this prism.

6 cm

10 cm

8 cm

Volume = _____ cm^3

(9 marks)