SECONDARY SCHOOL ANNUAL EXAMINATIONS 2010

Directorate for Quality and Standards in Education
Educational Assessment Unit

FORM 5 **MATHEMATICS SCHEME D** **TIME: 30 minutes**

Non Calculator Paper

Name: _____ **Class:** _____

Question	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**Total**
Mark											

Instructions to Candidates

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

1. a) Write in **figures**:
Thirty five thousand, seven hundred and ninety-one

_____

b) Write the **next term**:

12, 15, 19, 24, 30, _____

(2 marks)

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2. **Match** correctly as in the example.

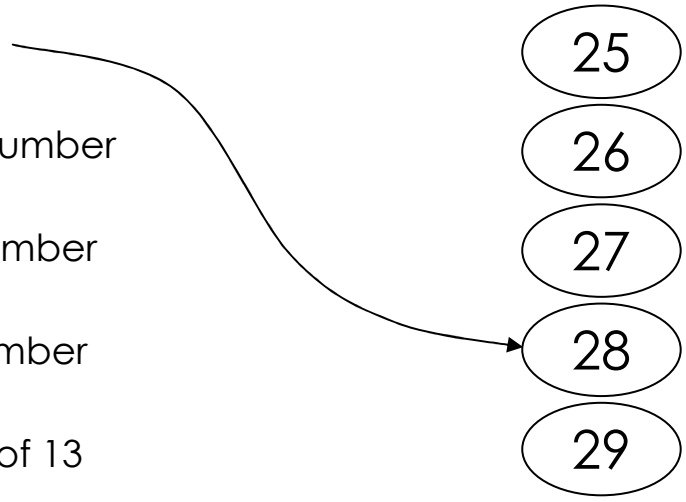
a) **Double** 14

b) A **square** number

c) A **prime** number

d) A **cube** number

e) A **multiple** of 13



(4 marks)

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3. a) Arrange in order **smallest first**:

38·09 38·9 3·809

_____ _____ _____

b) Work out:

$(3{\cdot}5 + 3{\cdot}5) \times 2 =$ _____

(3 marks)

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4. Fill in: a) 3921 cm = _____ m

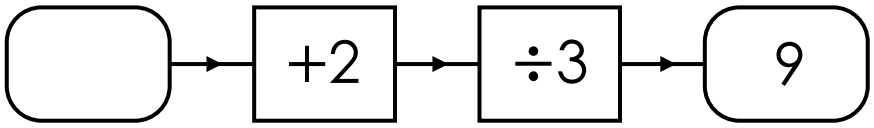
b) 3·6 kg = _____ g

(2 marks)

5. Give a **rough estimate** for 78×18.

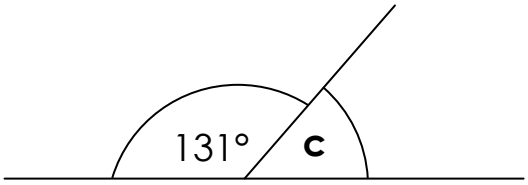
(1 mark)

6. **Complete** the function machine.



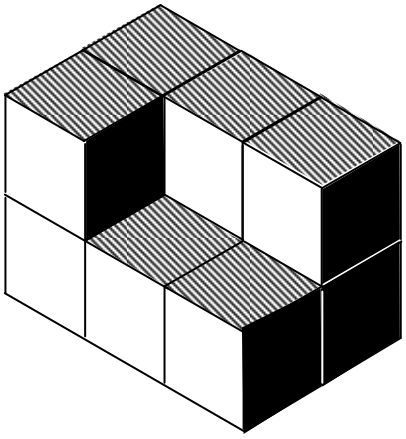
(2 marks)

7. Work out the **value of c**.



(1 mark)

8. Each cube in the figure is 1 cm^3.
Find the **volume** of the solid.



_____ cm^3

9. A bus can carry a total of 45 passengers.
Only $\frac{2}{5}$ of the bus is full.
How many passengers are on the bus?

_____
(2 marks)

10. There are 493 students in a school.
Each class is made up of 29 students.
How many classes are there in the school?

(2 marks)

End of Paper

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FORM 5 **MATHEMATICS SCHEME D** **TIME: 1h 30m**

Main Paper

Question	1	2	3	4	5	6	7	8	9	10	11	12	13	Total Main	Non Calc	**Global Mark**
Mark																

DO NOT WRITE ABOVE THIS LINE

Name _____ **Class** _____

- **Answer all questions.**
- **This paper carries 80 marks.**
- **Calculators and mathematical instruments are allowed but all necessary working must be shown.**

1. a) Jody bought the following items from *"Acqua Super Store"*.
Work out how much Jody has to pay.

€_____

b) Jody is paying by cheque. Fill in the cheque for her.

CBG Central Bank of Gozo Date _____

Pay *Acqua Super Store* _____ or order

_____ €

_____

Jody Attard

000814 88 0561 103752330081

(4 marks)

2. The calculator shows the result of a calculation.

a) Write the result
   i) correct to **1 d.p.** _____.

   ii) correct to the **nearest 10**. _____.

b) The **value** of 5 in the result is _____.

c) 8531.164 in **standard form** is _____.

(4 marks)

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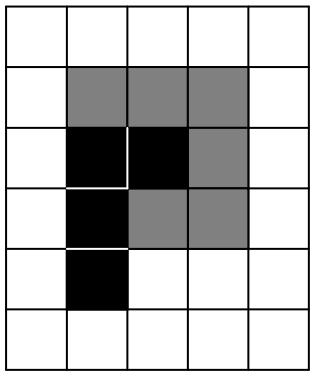
3. One square in the diagram is chosen at random.
Work out the probability of choosing:



a) a **grey** square. _____

b) a **black** square. _____

c) a **white** square. _____

(4 marks)

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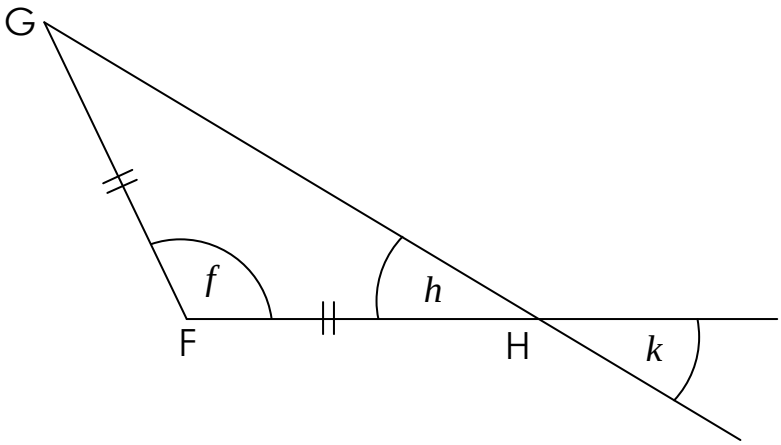
4. a) Use your **protractor** to measure the angle marked f.



f = _____ °

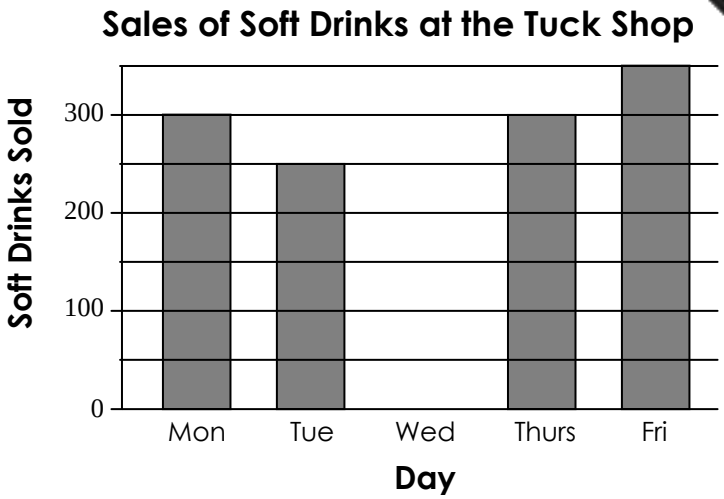
b) Triangle FGH is isosceles.
Without using your protractor, **work out** the values of angles h and k.

h = _____ °, k = _____ °

Name _____ Class _____ **D**

5. The table and the graph show the number of soft drinks sold in a week at a school Tuck Shop.

Day	Soft Drinks sold
Monday	300
Tuesday	250
Wednesday	150
Thursday	
Friday	350
Total	1350



a) Complete the **table**.

b) Complete the **bar graph**.

c) Fill in:
The two days with an **equal number of sales** are _____ and _____.

d) What **fraction** of the soft drinks sold during the whole week were sold on **Wednesday**? Give your answer in its simplest form.

_____
(5 marks)

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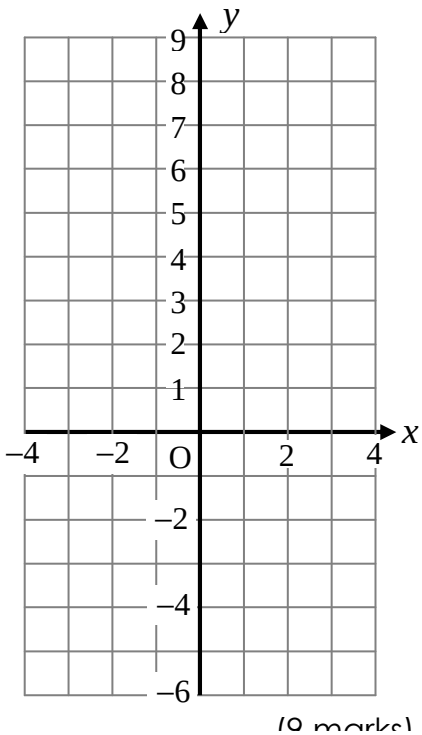
6. a) **Plot** the following points on the graph:
(–2, –6) (1, 3) (2, 6) (3, 9)



b) Use pencil and ruler to **join the points**.

c) Complete the straight line **equation**:

$y =$ _____ x

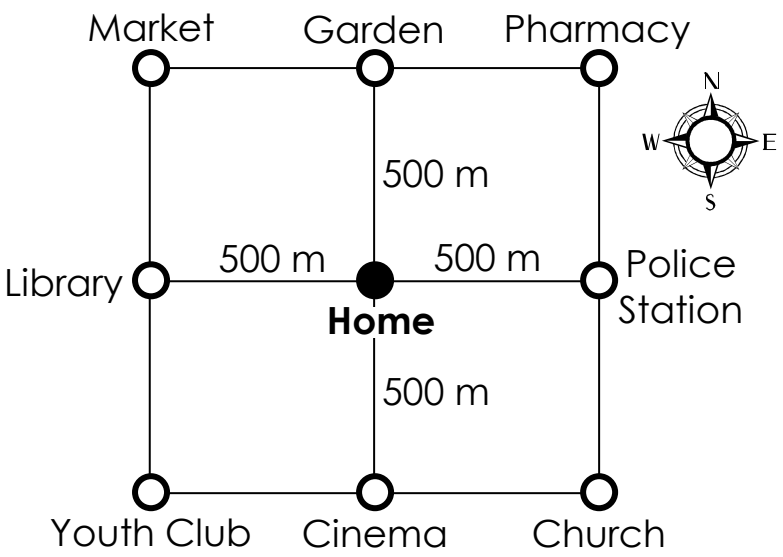
d) Use the graph to fill in:

i) When $x = 0$, $y =$ _____

ii) When $y = –3$, $x =$ _____.

(9 marks)

7. The diagram shows a plan of a village.



a) Use **compass directions** to fill in (the first one is done for you).

i) The Garden is *North* of Home.

ii) The Pharmacy is _____ of the Market.

iii) The Library is _____ of the Cinema.

b) i) Louis is at Home. He walks **500 m west** and **500 m south**.

He is now at the _____.

ii) Judith is at the Market. She walks **1000 m south** and **1000 m east**.

She is now at the _____.

(6 marks)

8. In 5 games a basketball team scored the following points:

91 76 91 88 64

Work out:

a) the **mode** _____

b) the **median** _____

c) the **mean**

_____

9. a) Change i) 16:37 into 12-hour time _____

ii) 5.45 a.m. into 24-hour time _____

b) Look at the calendar for February 2010.

FEBRUARY 2010						
Mon	Tues	Wed	Thurs	Fri	Sat	Sun
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28

Use the calendar to answer these questions:

i) Is February 2010 a leap year? _____ (Yes/No)

ii) How many weeks are there in February 2010? _____

iii) What day is 31st January 2010? _____

(6 marks)

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10. a) Draw a **circle** centre O, having a radius 3·5 cm.
In the circle construct and label a **regular hexagon** ABCDEF to touch the circumference.
Join AO and OB.

•O

b) Fill in:

i) Triangle OAB is _____ .
(right-angled, scalene, isosceles, equilateral)

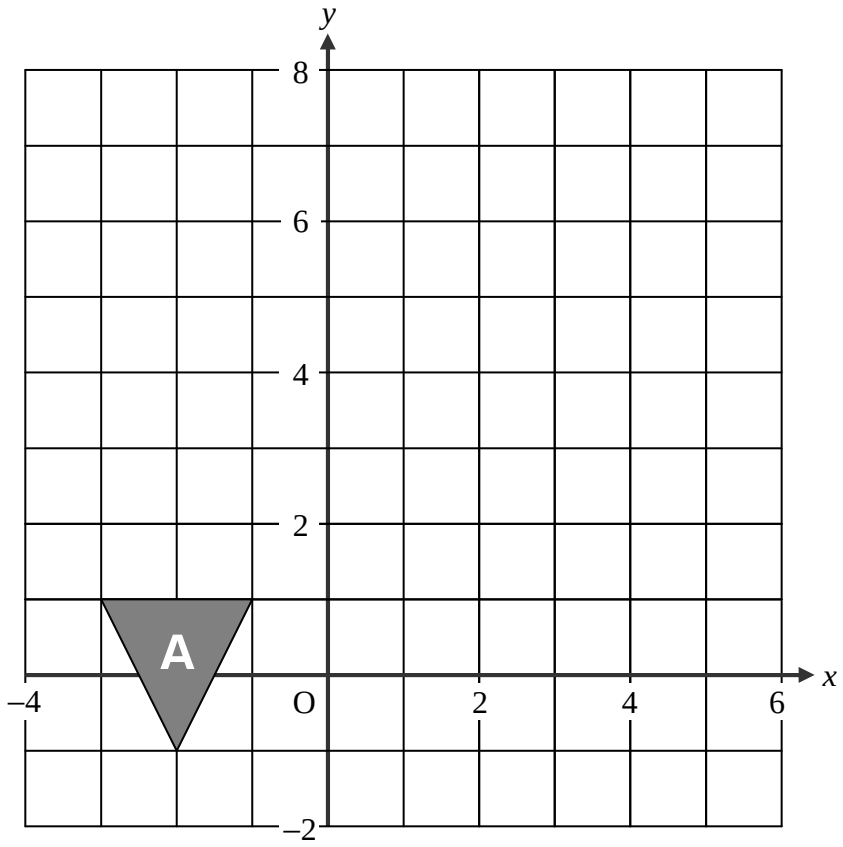
ii) The hexagon ABCDEF has _____ lines of symmetry.

(7 marks)

11. a) Use the grid.

i) Shape B is a **translation** of shape A **5 units right** and **6 units up**

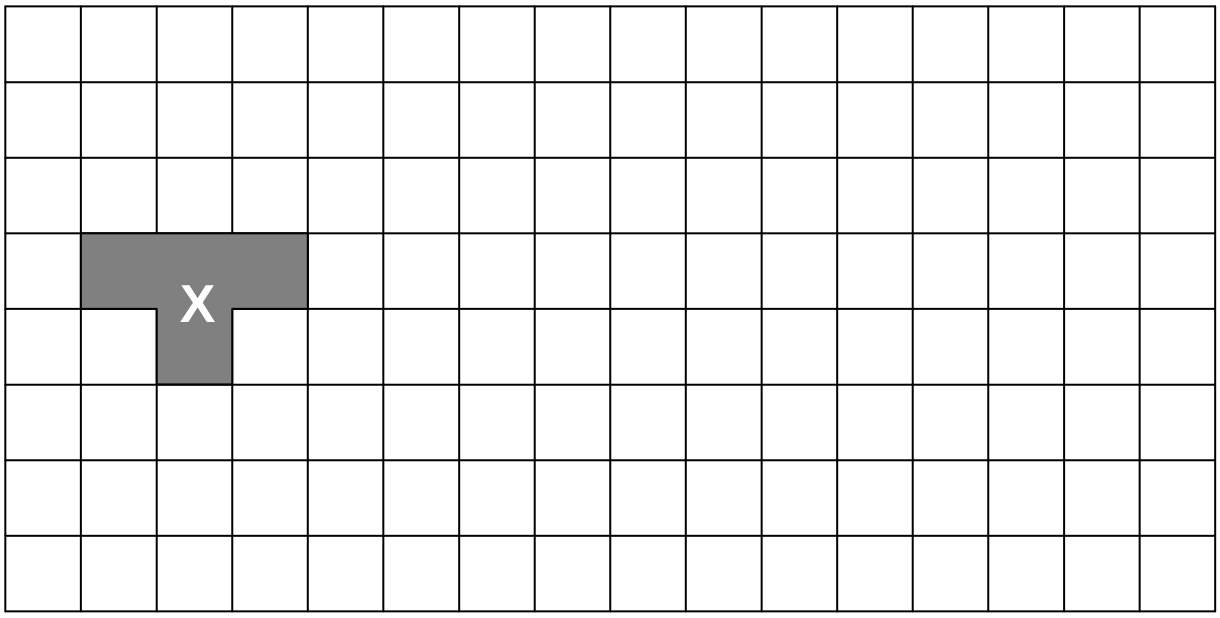
Draw and label shape B.



ii) Shape C is a **reflection** of shape B in the y**-axis**.

Draw and label shape C.

b) Draw an **enlargement** with a **scale factor 3** of shape X.

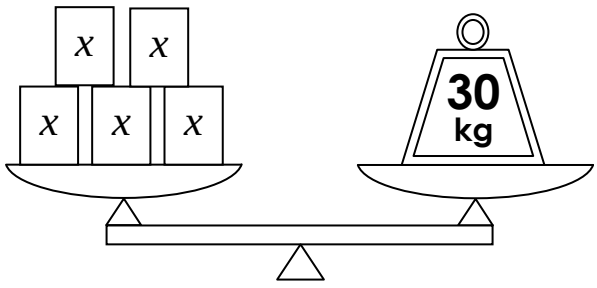


(7 marks)

12. a) Simplify:
$8x + 3y - 5x - 5y$

b) If $a = 3$ and $b = -2$ find the value of $9a + 5b$

c) Look at the diagram.
All the boxes have the same weight (x kg).
Find the weight of one box.



(9 marks)

13. a) The Shop "Sports Mania" is selling hockey shirts.
16 hockey shirts cost €732.
Find: i) the cost of 1 hockey shirt.

€ _____

ii) the cost of 12 hockey shirts.

€ _____

b) On the internet 12 such hockey shirts cost US $783, including shipment.
The rate of exchange is €1 = US $1.45.
How much, in euro, do I have to pay if I buy 12 shirts over the internet?

€ _____

c) Fill in:
It is better to buy the shirts from _____
(Sports Mania, Internet)
because I save €_____.