DIRECTORATE FOR QUALITY AND STANDARDS IN EDUCATION
Department for Curriculum Management and eLearning
Educational Assessment Unit
Annual Examinations for Secondary Schools 2011

C

FORM 2 **MATHEMATICS SCHEME C** **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 25 marks.**
- **Calculators and protractors are NOT ALLOWED.**

1.

a) $\begin{array}{r} 18.36 \\ +\ 105.29 \\ \hline \\ \hline \end{array}$

b) $\begin{array}{r} 206.15 \\ -\ 93.41 \\ \hline \\ \hline \end{array}$

(2 marks)

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2. Work out :

a) $136.182 \times 100 =$ _____

b) $465.15 \div 10 =$ _____

c) $(19 - 14) \times 2^2 =$ _____

(4 marks)

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3. Alan has 20 sweets.
He divides them among his 3 friends.
He gives the same number of sweets to each of his 3 friends.

a) How many sweets does he give to each of his friends?

_____ sweets

b) How many sweets does he have left?

_____ sweets

(3 marks)

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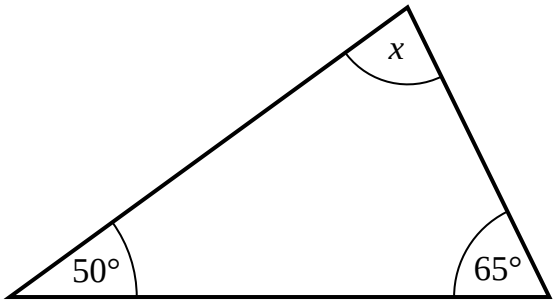
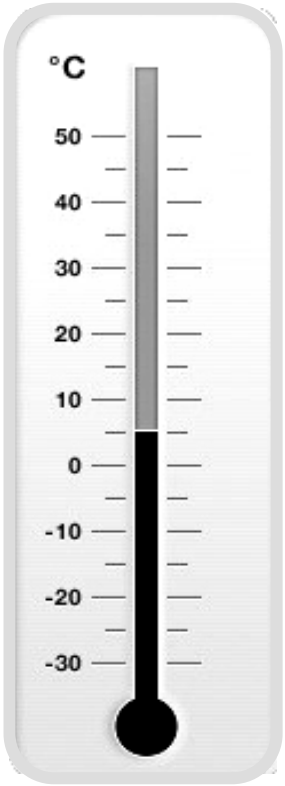
4. Work out the value of the angle marked *x*.



$x =$ _____ °

(3 marks)

5. This thermometer shows the temperature in Moscow at noon.



The temperature in Moscow is _____ °C.

At night the temperature in Moscow falls by 7°C.

The temperature in Moscow at night is _____°C.

(2 marks)

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6. Fill in the blanks. The first one is done for you.

a) $\frac{2}{3} = \frac{\boxed{18}}{27}$

b) $\frac{\square}{5} = \frac{3}{15}$

c) $0.36 = \frac{\square}{100} = \frac{9}{\square}$

d) $55\% = \frac{55}{\square} = \frac{11}{\square}$

(4 marks)

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7. Janet uses fat and flour in the ratio 1 : 2.

How much flour does she need when she uses 225 g of fat? _____g

(1 mark)

8. This fuel tank holds 40 litres of petrol when full.

a) What fraction of the tank is full?

b) How many litres of petrol are there in the tank?

_____ litres (2 marks)

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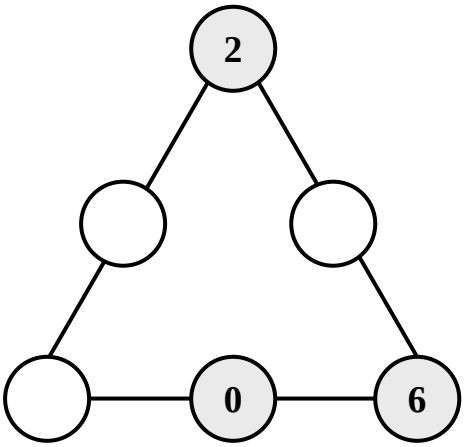
9. There are three different numbers on each of the sides of this triangle.
The sum of the numbers on each side is always 11.



Put these numbers in the right place on the triangle.

(2 marks)

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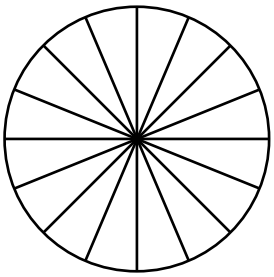
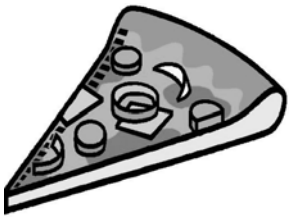
10. A pizza is divided into 16 pieces.

a) Jake eats $\frac{5}{8}$ of the pizza. Shade the number of pieces that Jake eats.





b) Jake eats another $\frac{1}{8}$ of the pizza.

Work out the fraction of the pizza that he eats, giving your answer in its simplest form:

$\frac{5}{8} + \frac{1}{8} =$ (2 marks)

END OF PAPER

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C

FORM 2 **MATHEMATICS SCHEME C** **TIME: 1h 30min**
Main Paper

Question	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total Main	Non Calc	**Global 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) Use your calculator to find the value of $213.345 \div 67.205$.

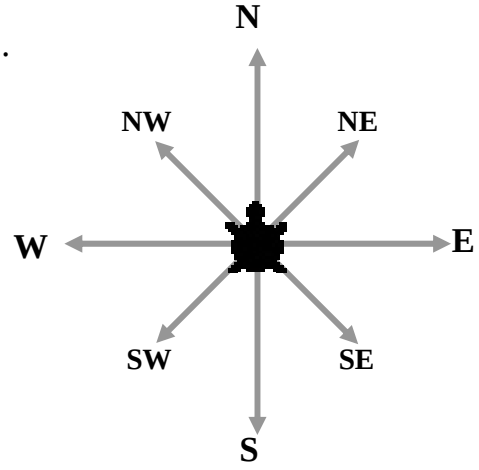
Give your answer correct to 1 decimal place. _____

b) Change 3.45 kg into grams. _____ g

c) Give your answer in (b) correct to the nearest 100. _____

(4 marks)

2.



The LOGO turtle is facing North.

Luke types **RT 135**.

Which direction will the turtle now face?

_____

(1 mark)

3. a) Fill in the blanks using the following words :

right, straight, acute, obtuse, point

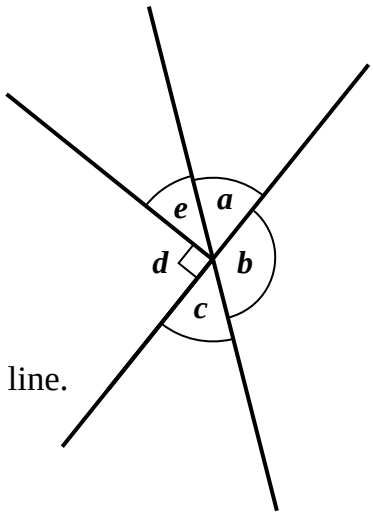
(i) Angle ***a*** is an _____ angle.

(ii) The only _____ angle is angle ***b***.

(iii) All angles at a _____ add up to 360°.

(iv) Angle ***d*** is a _____ angle.

(v) Angles ***a*** and ***b*** form angles on a _____ line.



b) Use your protractor and measure angle ***b***. ***b*** = _____°

(6 marks)

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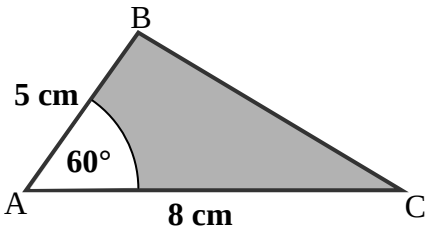
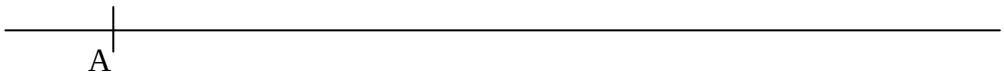
4. a) Draw triangle ABC accurately.





b) Measure the length of side BC. BC = _____cm

c) Underline the correct phrase :

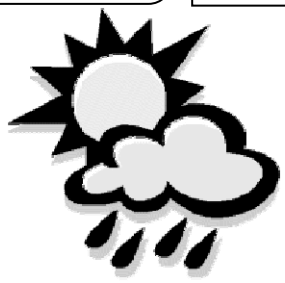
Triangle ABC is (a scalene, an isosceles, an equilateral) triangle.

(5 marks)

Name: _____ **Class:** _____

C

5. Janet recorded the average temperatures during a week in May.



22°C	**28°C**	**28°C**	**31°C**	**27°C**	**25°C**	**28°C**

a) Find the median temperature for that week.

Median = _____

b) Which temperature is the mode? Mode = _____

c) Calculate the range of these temperatures. Range = _____

(3 marks)

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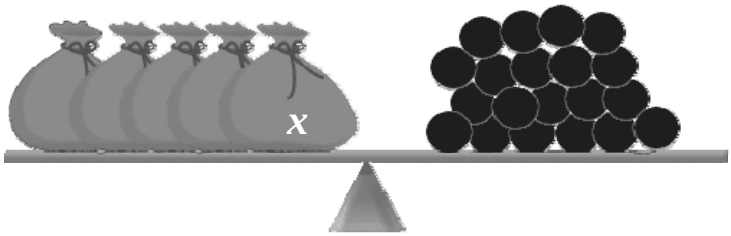
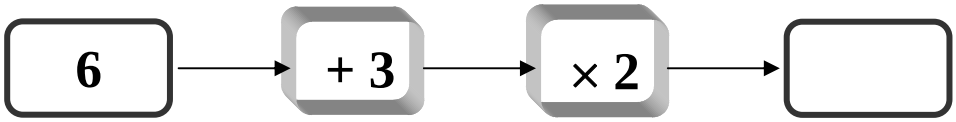
6. a) Solve these equations :

(i) $x - 3 = 12$ (ii) $5x = 20$

x = _____ x = _____



b) Fill in the missing numbers in the following number machines

(i) 

(ii) 

(6 marks)

7. a) Write the two **prime numbers** that are between 10 and 15. _____

b) Give one **factor** of 20. _____

(3 marks)

---

8. Lisa asks students about their favourite ice-cream flavour.
Their answers are listed in the table below.

Flavour	Number of Students
Vanilla	15
Chocolate	20
Strawberry	15
Banana	10

a) Which is the least favourite flavour? _____

b) How many students are asked in all? _____ students

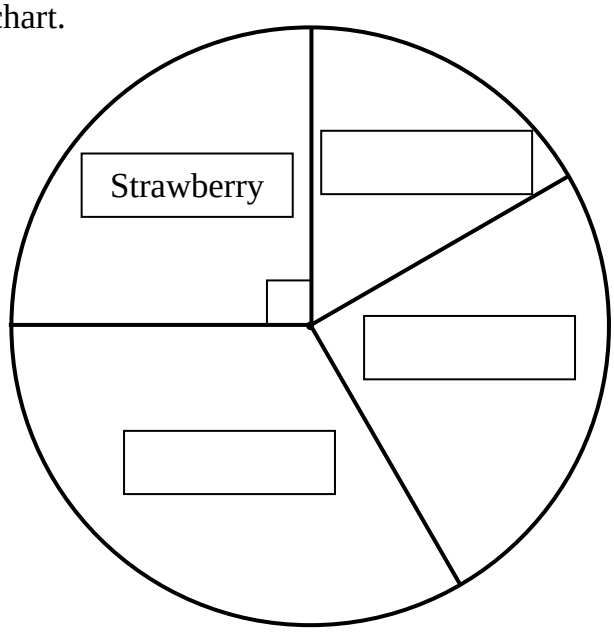
c) Lisa chooses a student at random.
What is the probability that a student who prefers banana flavour is chosen?

_____

d) What fraction of the students prefer vanilla flavour? _____

e) Write the fraction in (d) as a percentage. _____

f) Complete the pie chart.



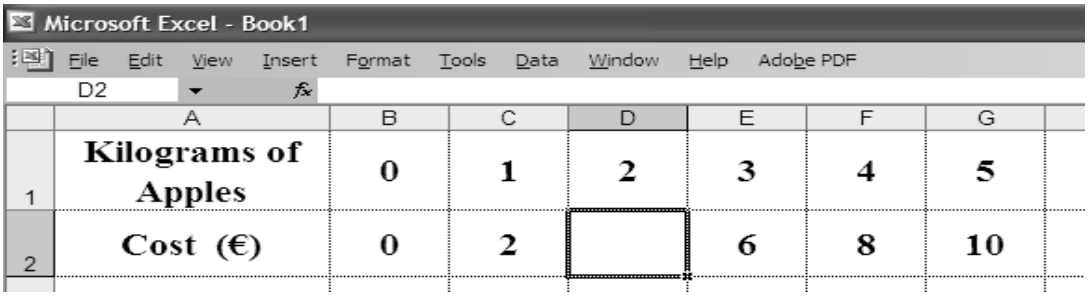
(8 marks)

Name: _____ **Class:** _____ **C**

9. John writes a number machine to find the cost of apples.
One kilogram of apples costs €2.

a) Fill in the number machine that John uses.

b) John uses also a spreadsheet to calculate the cost of apples.

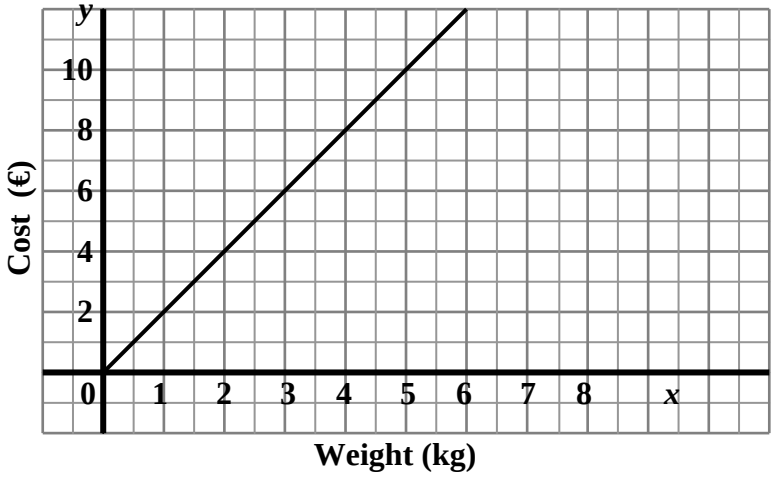


(i) Underline the formula that John types in cell D2.

= A1 + 2 **= D1*2** **= A2*2** **= D1 + 2**

(ii) Write the value that he obtains in cell **D2**. _____

c) John plots the values in the spreadsheet on a graph. He forms a straight line.



From your graph find the cost of 4.5 kg of apples. € _____

(4 marks)

10. During a sale, a jacket is sold at a discount of 20%.
The jacket costs €54.

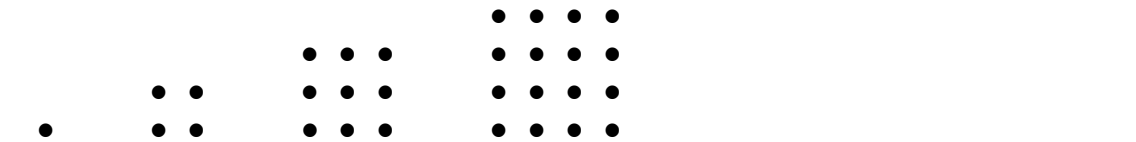
a) How much do I save when I buy the jacket ?

€ _____

b) Fill in the new **sale** price in the price tag.

(4 marks)

11.



a) Complete the pattern by drawing the next two shapes.

b) Complete the list of the numbers of circles in each shape :

Shape	1	2	3	4	5	6
Number of circles	1	4	9	16		

c) Underline the correct word :

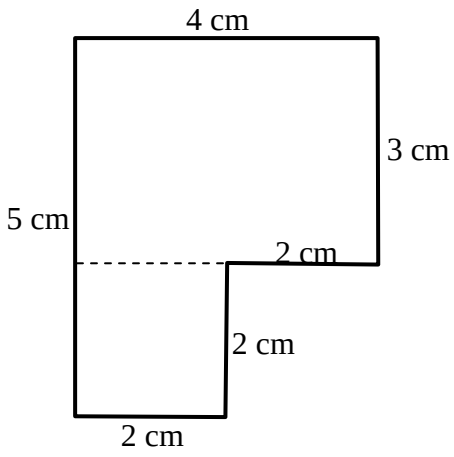
All the numbers in the second line of the table are (prime, odd, square, factor) numbers.

d) How many circles will there be in Shape 10?

_____ circles

(6 marks)

12.



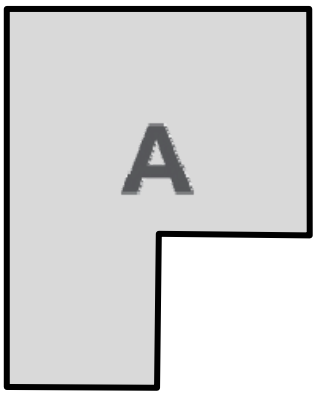
a) Calculate the perimeter of this shape.

Perimeter = _____ cm

b) Find the area of this shape.

Area = _____ cm^2

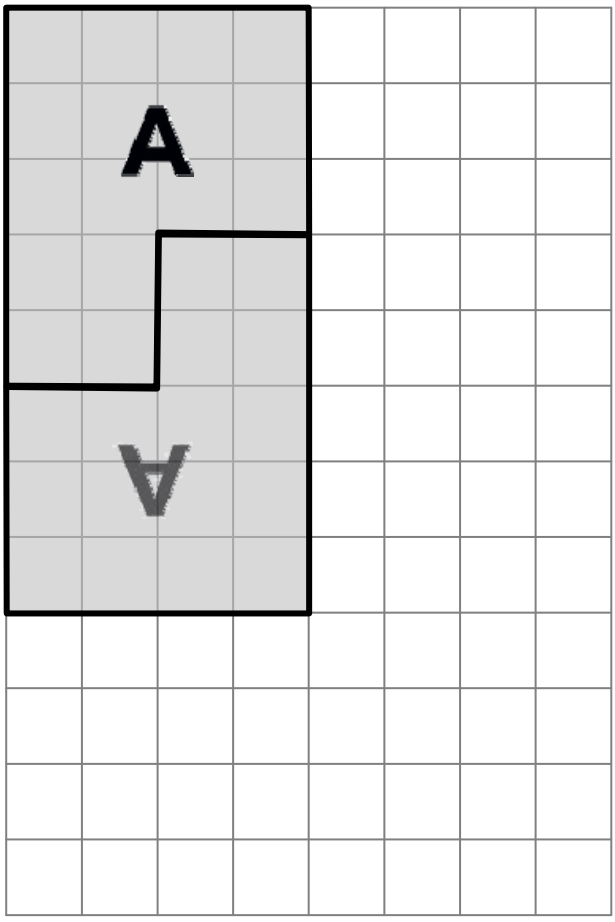
c) Thomas has a number of shapes like shape A.



He fills the grid with a number of these shapes.

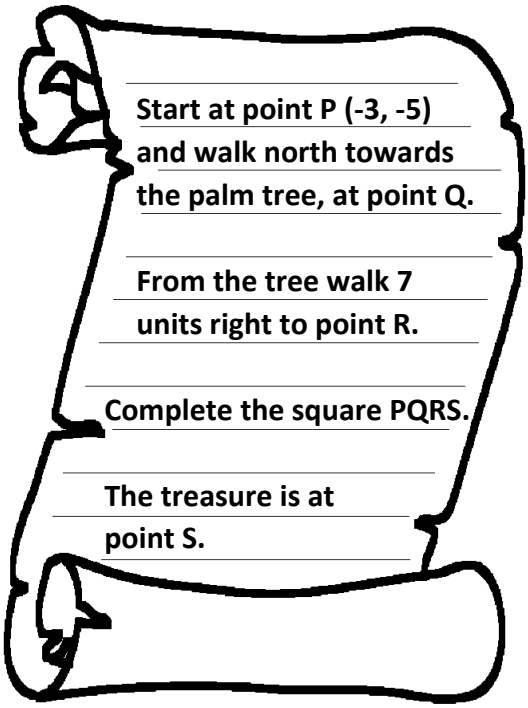
The first 2 patterns have been placed for you.

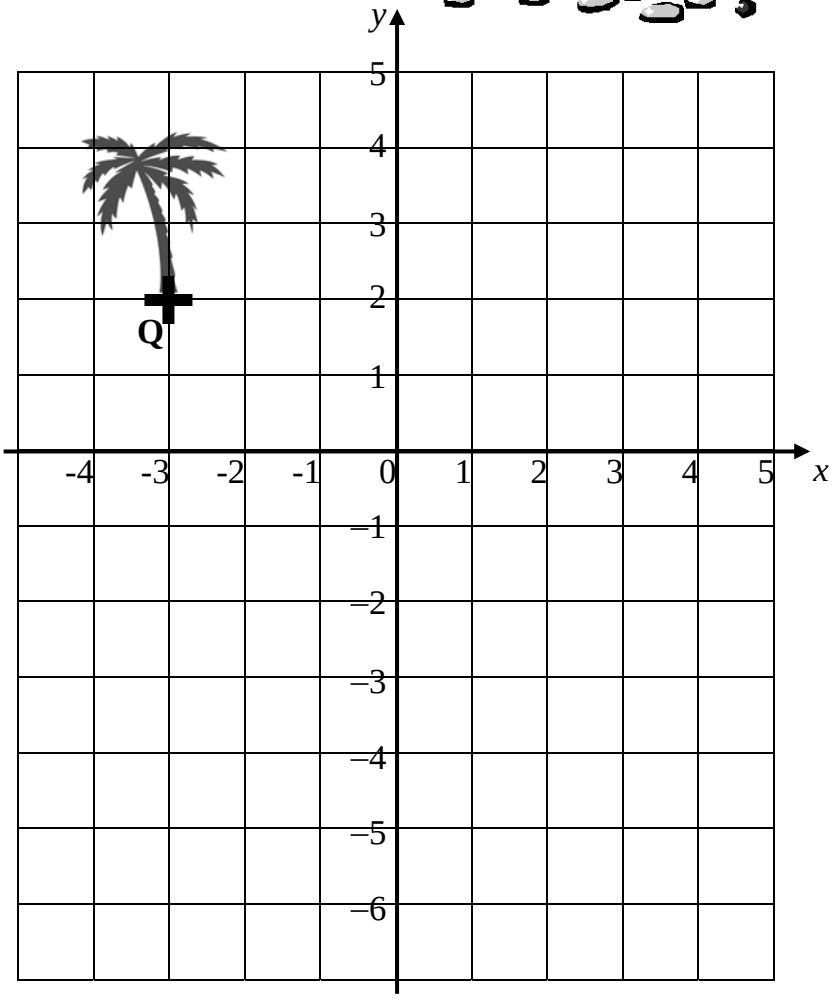
Use 4 more patterns to fill in the whole space.



(7 marks)

13. The following instructions will help you find the hidden treasure.
Read the instructions and then answer the questions below.





a) Plot your starting point, P (– 3, – 5), on the graph.

b) Give the coordinates of the palm tree, at point Q. (_____,_____)

c) Mark point R on the graph and write its coordinates. (_____,_____)

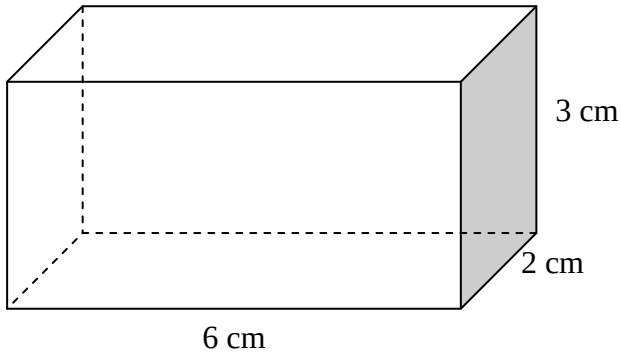
d) Complete the square PQRS.

e) Give the coordinates of the treasure at point S. (_____,_____)

(6 marks)

14. This is a cuboid.

a) Find the volume of this cuboid.



V = _____ cm^3

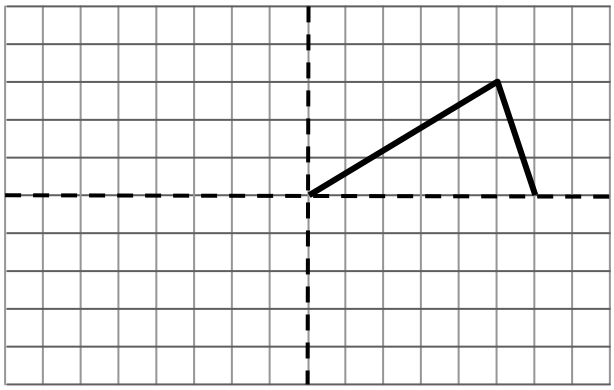
b) Fill in the blanks :

A cuboid has _____ faces and _____ vertices.

c) Draw a net of this cuboid.

(6 marks)

15. a) (i) Complete this shape so that the dotted lines are its lines of symmetry.



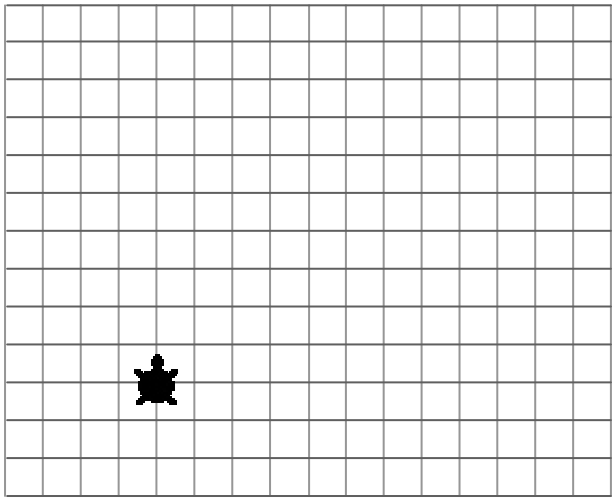
(ii) Complete :

This shape has rotational symmetry of order _____.

b) (i) Maria draws a sketch of a turtle on the grid.

She moves the turtle 6 units right and 4 units up.

Mark the new position of the turtle with the letter ✕.



(ii) Maria now uses LOGO.

She uses a scale of 1 unit = 10 turtle steps.

Fill in the blanks in the commands that Maria types to move the LOGO turtle to its new position, with the letter ✕.

_____ 90 FD 60 LT 90 FD _____

(6 marks)

END OF PAPER