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 Work out the following:

a)
```
  4 4 · 3 8
+ 3 5 · 0 2
_____

_____
```

b)
```
  7 3
− 5 4
_____

_____
```

c) $7 - 9 =$ _____

(2 marks)

2   Solve these equations:

a) $x - 5 = 7$ $x =$ _____

b) $n \div 6 = 8$

$n =$ _____

c) $9y = 45$

$y =$ _____

(3 marks)

3 In a lottery, a total of 100 tickets were sold. John bought 5 tickets and Jane did not buy any tickets. What is the probability that:
a) John wins the prize?

_____

b) Jane wins the prize?

_____

(2 marks)

4 Given that $v = u + 10t$, find the value of v when $u = 20$ and $t = 1·5$.

$v =$ _____

(2 marks)

5 Tom was using some squares to make the patterns shown below.
   a) Draw **Pattern 4**.

Pattern 1	**Pattern 2**	**Pattern 3**	**Pattern 4**

b) Complete the table:

Pattern Number	1	2	3	4	5
Number of squares	1	3			

(3 marks)

6 Work out the following, simplifying your answer where possible:

a) $\dfrac{7}{9} - \dfrac{5}{9} =$

_____

b) $\dfrac{7}{11} + \dfrac{4}{11} =$

_____

c) $\dfrac{1}{3} \times 765 =$

_____

(4 marks)

7 Find the mean (average) of the following numbers:

5,   11.4,   8.6,   4,   6,   7,   6.2,   4.8,   9,   8.

_____

(2 marks)

8   Fill in the blanks. (The first one is done for you.)

$$257 \text{ cm} = \underline{\ 2.57\ } \text{ m}$$

$$45 \text{ cm} = \underline{\hspace{2cm}} \text{ m}$$

$$\underline{\hspace{2cm}} \text{ m} = 2.6 \text{ km}$$

$$4350 \text{ g} = \underline{\hspace{2cm}} \text{ kg}$$

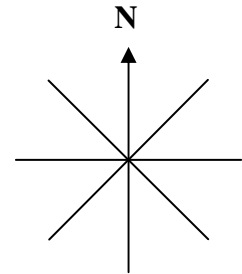$$\underline{\hspace{2cm}} \text{ g} = 1.8 \text{ kg}$$

(3 marks)

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9   How many degrees are there:

a) turning clockwise from North to South-east ?

N

$\underline{\hspace{2cm}}$ °

b) turning clockwise from North-west to North-east?

$\underline{\hspace{2cm}}$ °

(2 marks)

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10   Work out : a) 25% of 80

$\underline{\hspace{2cm}}$

b) 50% of 76
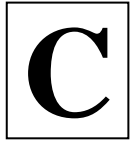
$\underline{\hspace{2cm}}$

(2 marks)

End of Paper

SECONDARY SCHOOL ANNUAL EXAMINATIONS 2010
Directorate for Quality and Standards in Education
Educational Assessment Unit

C

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

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

DO NOT WRITE ABOVE THIS LINE

Name: _____   **Class:** _____

- **Answer all questions.**
- **This paper carries 75 marks.**
- **Calculators and mathematical instruments are allowed but all necessary working must be shown.**

1a) Work out:

   i) $234.4 + 197.6$ _____
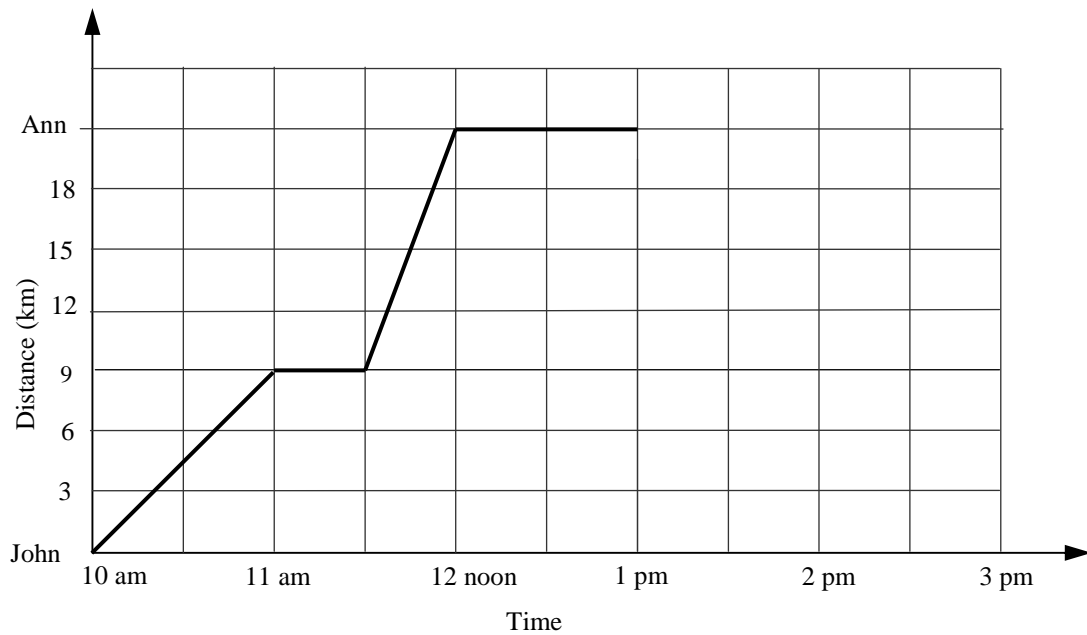
   ii) $27.8 - 15.8$ _____

b) Evaluate $\dfrac{234.4 + 197.6}{27.8 - 15.8}$

                                              _____

c) Fill in the missing number:

$$36 = \boxed{}^{\,2}$$

(4 marks)

2   John cycled from his house to Ann's house, 21km away. John left his house at 10 am and on his way, he stopped at a supermarket. The travel graph below shows part of John's journey.

a) At what time did John arrive at Ann's house?   _____

b) How long did John stay at the supermarket?   _____

c) John left Ann's house at 1 pm and took 2 hours to get back to his house.
    i)   Draw a straight line on the graph to show John's journey on his way back home.
    ii) How many hours was John away from home?

                                                                _____

                                                                (5 marks)

3   Divide €931 between Jack and Jill in the ratio 2: 5.

                                                        Jack: €_____

                                                        Jill: €_____

                                                                (5 marks)

Name

Name: _____   **Class:** _____

C

4   Maria has a rectangular piece of cardboard. This is 20 cm long and 18.5 cm wide. She wants to cut out the rectangle A.

   a) Calculate the area of the whole cardboard.

          _____cm^2
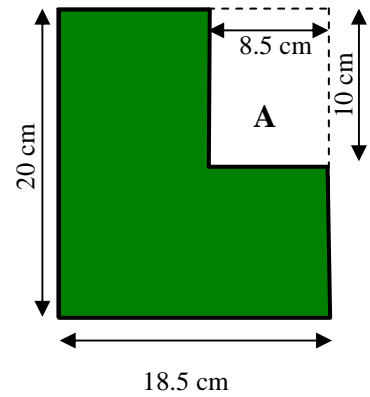

8.5 cm

A

10 cm

20 cm

18.5 cm

   b) What is the area of rectangle A?

          _____cm^2

   c) What is the area of the shaded part?

          _____cm^2

(6 marks)

5   In rectangle ABCD, AD = 10 cm.
E is a point on BC such that AE = 10 cm; angle ADE = 75°.

   a) Fill in the blanks:
     Triangle DAE is called an _____ triangle

     because 2 of its sides are _____.

   b) find the size of:
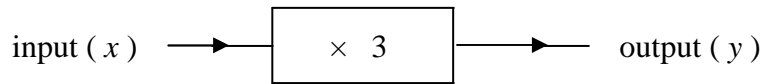   i)   angle x $x =$ _____

     ii)   angle y

                  $y =$ _____

     iii) angle z

                  $z =$ _____

(8 marks)

A   B y 10 cm   10 cm x E   75° z D   C
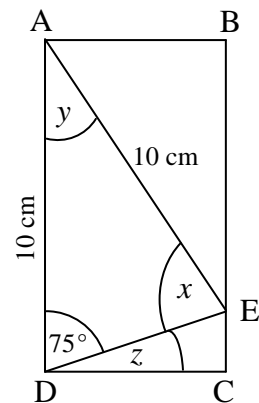
6   a) Use the number machine to complete the table below:

input (x) $\longrightarrow$ | $\times$ 3 | $\longrightarrow$ output (y)

.

x	0	1	3	5	
y		3			18

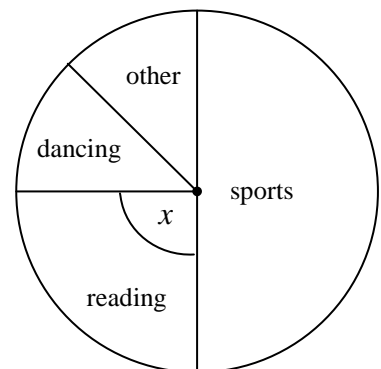b)   Use your table to draw the graph of $y = 3x$.
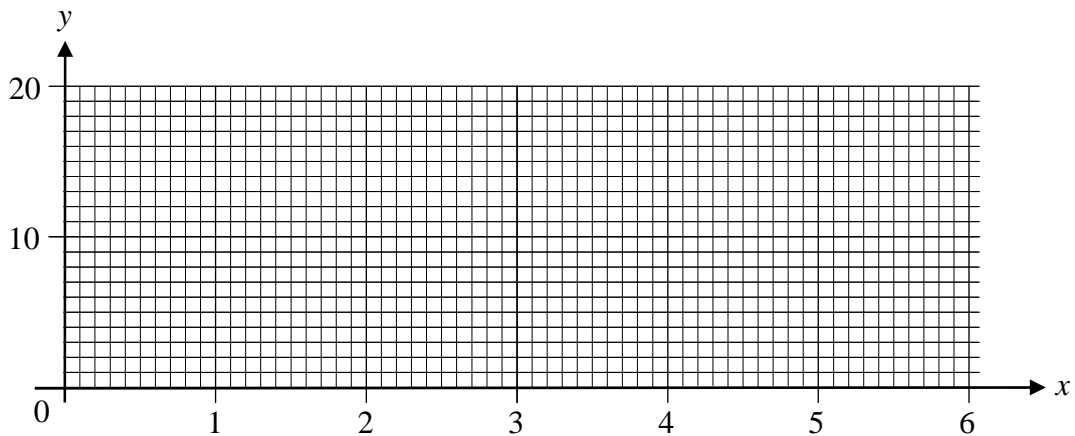
(8 marks)

7   A group of 200 students were asked what hobby they have. The Pie chart shows the results of this survey.

a) How many students prefer sports?

_____

b) Fifty students prefer reading. What is the size of angle x?

$x =$ _____ $^\circ$

c) The number of students who prefer dancing is equal to the number of students who have other hobbies. How many students have other hobbies?
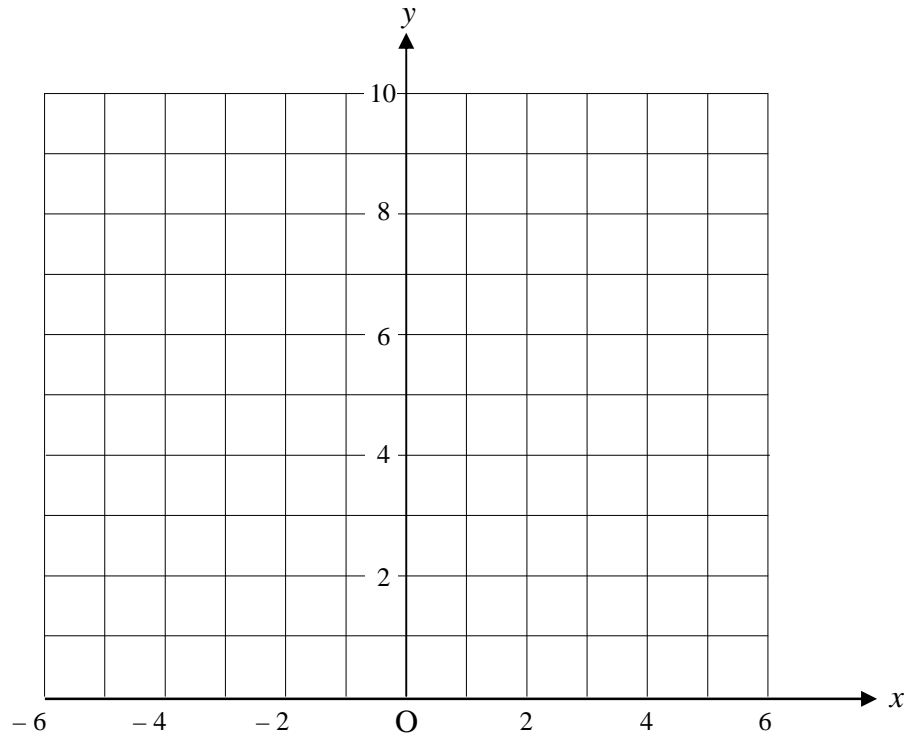
_____

(8 marks)

8   a) A square has rotational symmetry of order _____ .

     b) On the grid provided plot and label the following points:
        A (0 ,10)   B (1 , 7)   C (4 , 7)   D (2 , 5)   E (3 , 2)   F (0, 4)
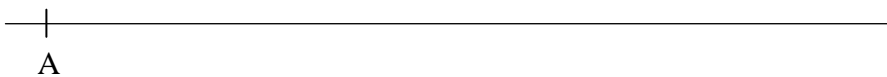   Join A to B, B to C, C to D and so on.

     c) Using the *y* axis as the line of symmetry, draw the image of shape ABCDEF.
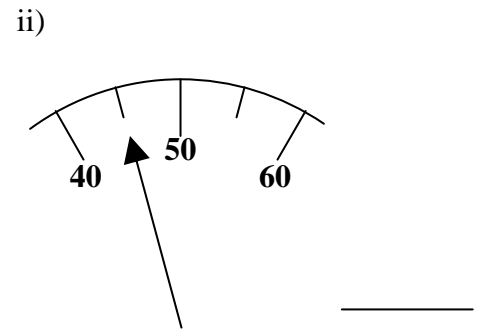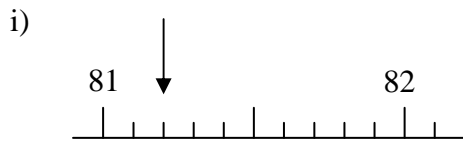

(11 marks)

9   On the given line mark point B such that AB =10 cm.
     At A draw line AC such that angle A = 45° and AC = 7 cm. Join BC and measure angle C.

A

Angle C = _____ °

(6 marks)

10   a) What number is the arrow pointing to on the two scales below?

i)

81 ↓   82

_____

ii)

40 50 60

_____

b) i) Round 783 correct to the nearest 10   _____
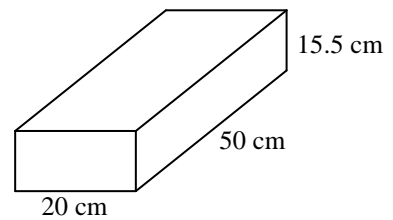
ii) Round 1876 correct to the nearest 100   _____

(4 marks)

11   The diagram represents a rectangular brick that is 20 cm
wide, 15.5 cm high and 50 cm long.

15.5 cm

50 cm
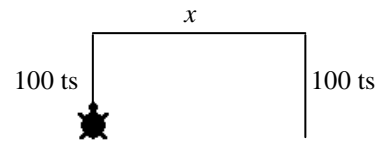
20 cm

a) Calculate the volume of the brick.

_____cm^3

b) If each brick weighs 31.4 kg, calculate the weight of 130 similar bricks.

_____ kg

(4 marks)

12   Paul wants to draw the shape shown using LOGO. The total length of the 3 sides is 420 turtle steps (ts), and each vertical side is 100 turtle steps long.

a) Work out the value of x.

x

100 ts   100 ts

$x =$ _____ ts

b) Fill in the blanks in this set of commands so that the turtle draws the diagram shown above:

PD FD 100 RT 90 FD _____   RT _____   FD _____

(6 marks)

_____

END OF PAPER

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