Annual Examinations for Secondary Schools 2011

C

FORM 1	MATHEMATICS	TIME: 30 minutes
	Non Calculator Paper	

Name: _____   **Class:** _____

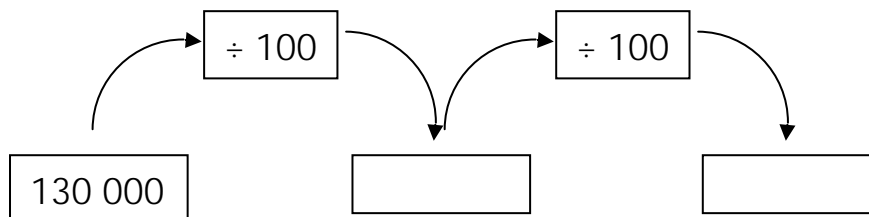| Question	1	2	3	4	5	6	7	8	Total
Mark									

Instructions to Candidates

- **Answer all questions.**

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

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

1. a)

$\times 10$ $\times 10$ $\times 10$

| 87 | | | |

b)

$\div 100$ $\div 100$

| 130 000 | | |
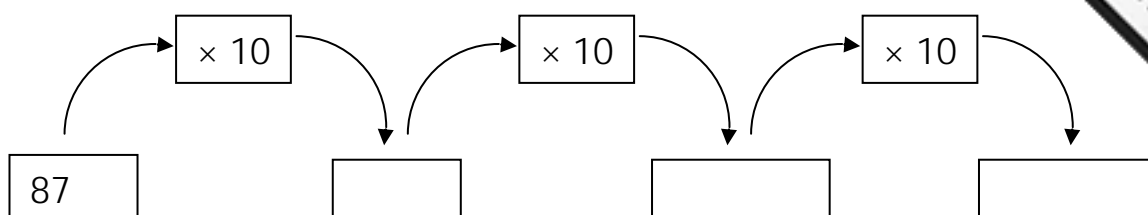
2. a) $4 \times 8 =$ ☐   b) $5 \times$ ☐ $= 35$

    c) $12 \div 4 =$ ☐   d) $42 \div$ ☐ $= 7$

(4 marks)

3. Ramona buys a packet of biscuits at €1.25, a box of chocolates at €2.33 and a bag of sweets at €1.37.

    a) How much does she spend?

        Answer _____

    b) She pays with a 5 Euro note. What change does she get?

        Answer _____
        (4 marks)

4. The prices for a boat trip are as follows:

   Adult   €2.50
   Child   €1.30

   a) Complete this formula:

   Cost (€) = ☐ **× number of adults** + ☐ **× number of children.**

   b) Work out the cost for a trip for a family of 2 adults and 3 children.

   Cost for 2 adults   € ☐ **+**

   Cost for 3 children   € ☐

   Total Cost   € ☐

   (4 marks)

5. a) Paul is **1 metre 55 centimetres** tall.
   Write this height in **centimetres**.

   Answer _____ cm

   b) A can holds **3.5 litres** of water.
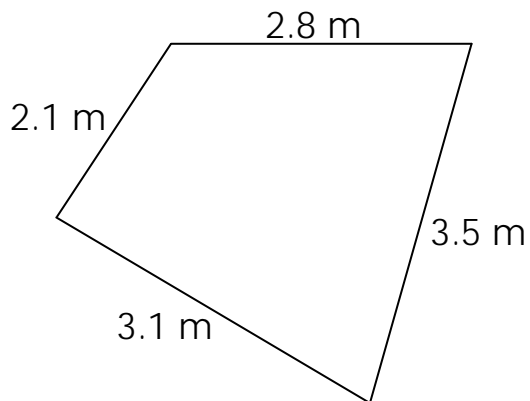   How many **millilitres** of water does this can hold?

   Answer _____ ml

   c) A box of oranges weighs **7400 grams**.
   Write this weight in **kilograms**.

   Answer _____ kg

   (3 marks)

6. Work out the **perimeter** of this field.

2.8 m

2.1 m

3.5 m

3.1 m

Answer _____m

(2 marks)

7. This is the number of goals for 5 football matches:

Match 1: 5 goals.
Match 2: 4 goals.
Match 3: 2 goals.
Match 4: 1 goal.
Match 5: 3 goals.

Work out the **mean number of goals** in each match.

Answer _____

(2 marks)

8. A bag contains an orange, two apples and a pear.
What is the probability that I pick an apple from this
fruit bag?

Answer _____

(1 mark)

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

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

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
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1.   Use the 10 by 10 square below to complete these sentences:
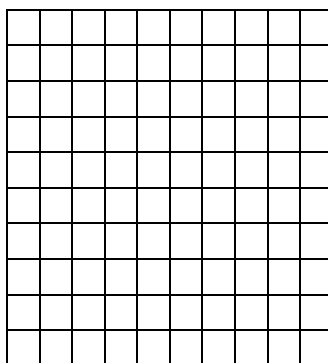
a) The 10 by 10 square has _____ small squares.

b) One half of the shape will have _____ small squares.

c) One half of the shape is _____.
                              (12 per cent, 50%, 75 out of hundred)

                                                        (3 marks)

2.

JULY 2011

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
26	27	28	29	30	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	29	30
31	1	2	3	4	5	6

a) (i) What day of the week is July 6th?

Answer _____

   (ii) How many Saturdays are there in this month?

Answer _____

   (iii) What day of the week is August 1st 2011?

Answer _____

b)   At **four o'clock in the afternoon** I go to the beach.
       Write this time using the 24-hour clock.

Answer _____

(4 marks)

3.   a)   Maria goes to a garden shop to buy some things.
          Complete this bill for her.

          3 flowering pots at €1.44 each.   _____

          2 bags of fertilizer at €1.23 each.   _____

          4 packets of seeds at €0.80 each.   _____

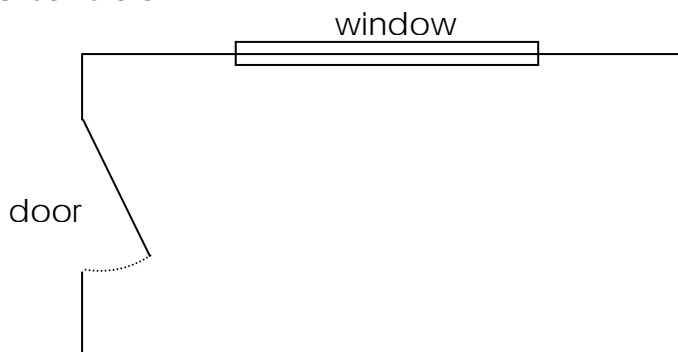   **Total cost**   _____

     b)   A group ticket for **five people** costs €11.00.
          Dylan is one of a group of five friends taking the group
          ticket. How much does he pay?

                                   Answer _____
                                              (5 marks)

4.   Timmy's room is 4 metres long and 2 metres wide. There is a
     2 metre window on the longer side and a 1 metre door on
     the shorter side.

                              window

     door

     a)   **Measure on the diagram:**

          (i)   the length of the room   Answer _____cm
          (ii)   the width of the room   Answer_____cm
          (iii)   the width of the window   Answer _____cm
          (iv)   the width of the door   Answer _____cm
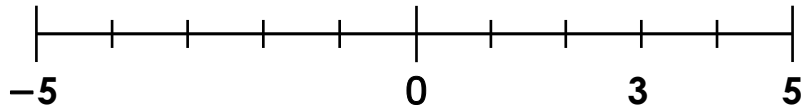
     b)   What **scale** is being used to draw the plan of Timmy's
          room?
                              Answer _____cm to _____m
                                              (6 marks)

5. a) Put these numbers on the number line below. The first one is already done for you.

3;   −1 ;   −4 ;   2.

−5   0   3   5

b) These are the temperatures in Warsaw and Helsinki.

Warsaw **−3°C,**   Helsinki **−5°C**

Which city has the colder temperature?

Answer _____

(4 marks)

6. a) Fill in the missing numbers in this table:

Number	Nearest 1000	Nearest 100	Nearest 10
1836	2000		
2153		2200	
2719			2720

b) Diane goes to the grocer and gets this bill:

€1.98
€2.12
€4.82
€11.05
€19.97

What euro note/notes does she need to pay this bill?

Answer _____

(7 marks)

7. Work out:

   a) (4 + 2) × (2 + 7)

   Answer _____

   b) 2.5 + 3.2 × 1.5

   Answer _____

   c) 8 ÷ (1.3 + 2.7)

   Answer _____

   _____ (6 marks)

8. a) Complete the table of inputs and outputs for the number machine.

Input	5	7	8	11	14
Output	3	5	6		

   b) Fill in the space in this number machine.

   | input | ⟶ | | ⟶ | output |
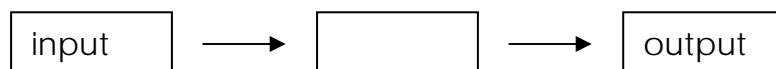
   _____ (3 marks)

9. Tony and Maria are playing the battle-ship game.
   This is Tony's sheet.
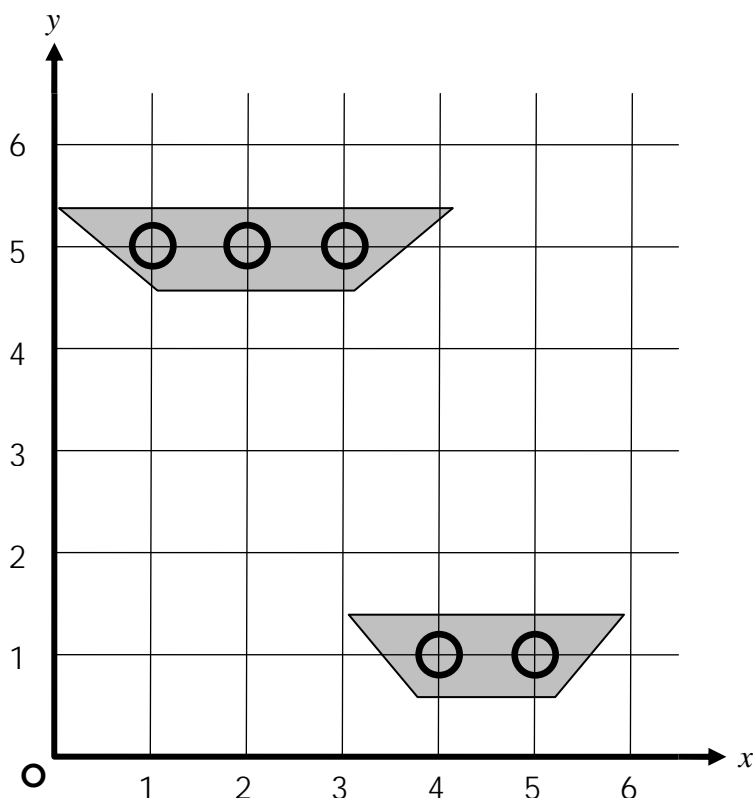
a) Maria chooses three points to try to hit Tony's ships.
   These are (1,1) , (5,3) , (3,4).
   Mark these points on Tony's grid.

b) Does Maria hit any of Tony's ships?

   Answer _____

c) Mark on the grid two points that will hit one of Tony's
   two ships.

   Answer _____

   (6 marks)

10. Alfred has a plant shop and he keeps a record of how ma[ny] plants he sells each day.
    This is his record sheet for a particular week.
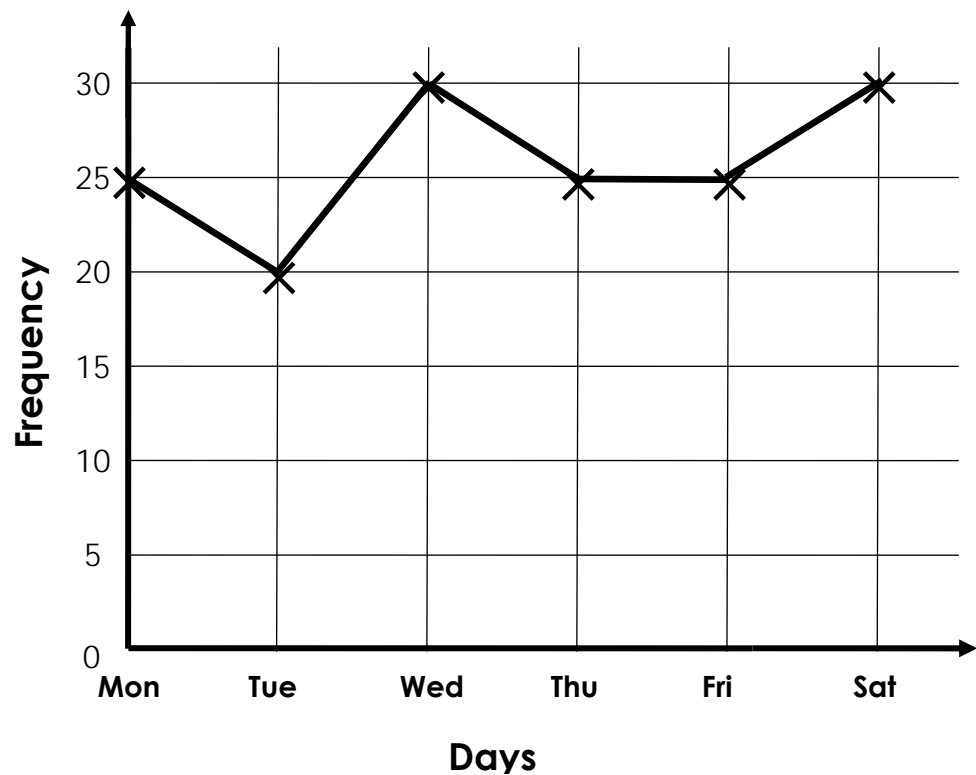
a) Alfred sells most plants on _____ and _____.

b) Alfred sells the least plants on _____.

c) How many plants does he sell **in all** during this week?

Answer _____

(4 marks)

11. a)   Measure the angles of the triangle **ABC**.

B

C

A
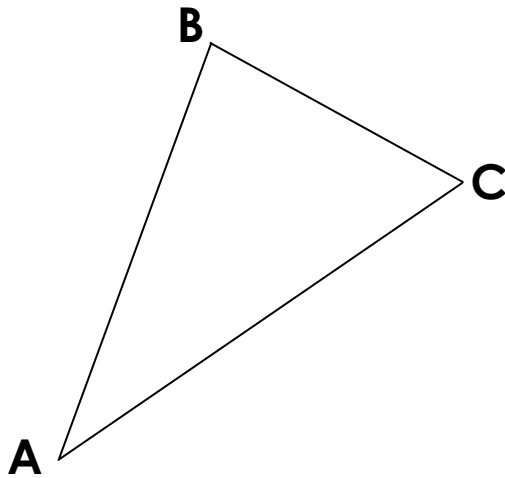
(i)   angle **A** _____°

(ii)   angle **B** _____°

(iii)   angle **C** _____°

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

b) What is the **order of rotational symmetry** of these shapes?

(i)   a square: order _____

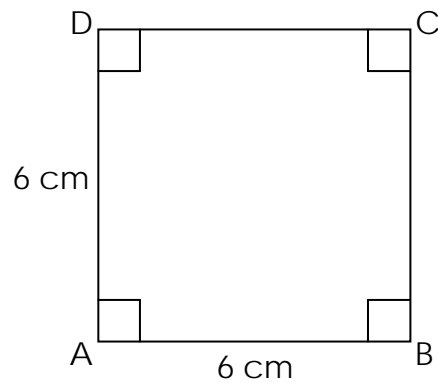(ii)   a regular pentagon: order _____
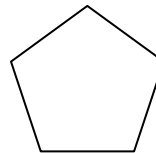
(iii)   an equilateral triangle: order _____
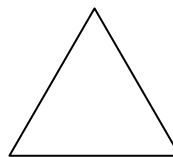
(7 marks)

12. a) Use your ruler and your set square or protractor to draw a square whose sides are 6 cm each.
Line AB is done for you.

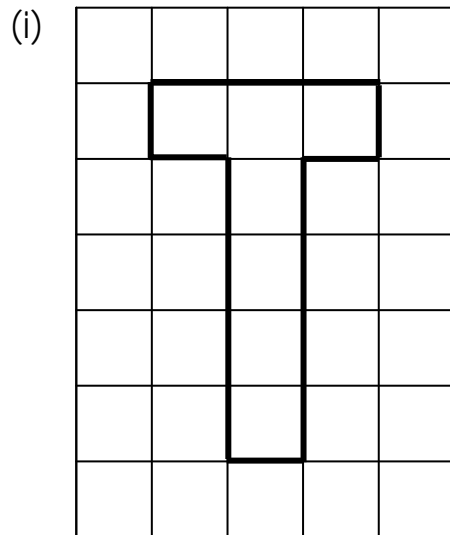D ⌐￣￣￣￣⌐ C
│   │
6 cm   │
│   │
A └_____┘ B
    6 cm

A |————————————| B
        6 cm
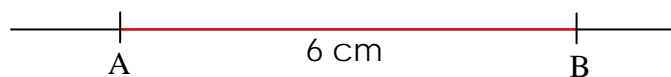
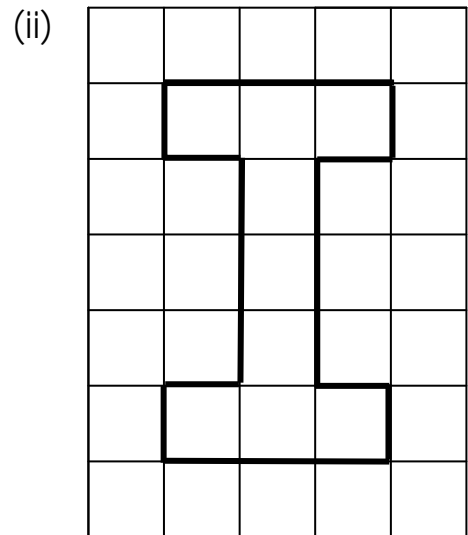b) Fill in the missing LOGO commands for the turtle to draw a square.

PD REPEAT 4 [_____ 50   RT _____]

(5 marks)

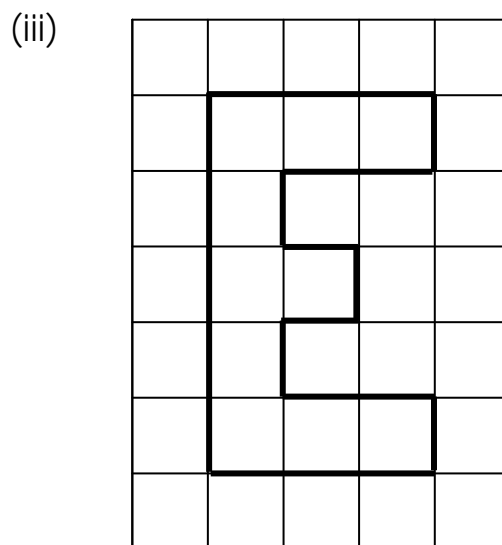13.   a)   What is the area of each of these letters?
(Each square represents 1cm²)

(i)

(ii)

Area _____cm²   Area _____cm²

(iii)

Area _____cm²
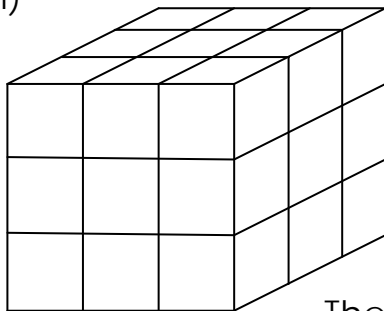
13. b) Fill in the units for these measurements.
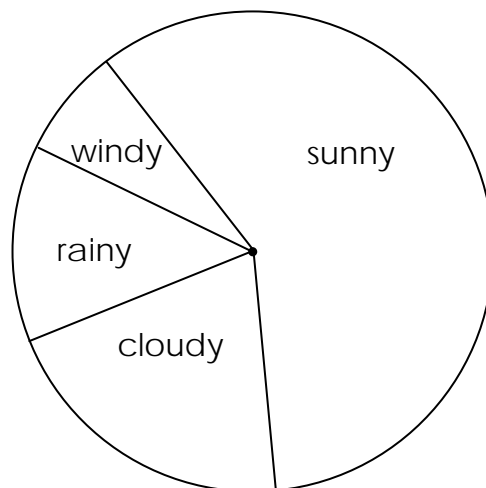(Choose from m, cm, cm², cm³.)
Each square has a side of 1cm.

(i)
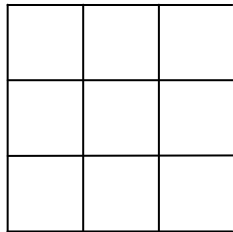
The area of this square is 9 _____

(ii)

The volume of this cube is 27 _____

(5 marks)

14. a) The pie chart shows the type of weather we had last March.

windy

sunny

rainy

cloudy

Choose **True** or **False** near each sentence.   **True False**

(i) More than 15 days were sunny last March.   ☐   ☐
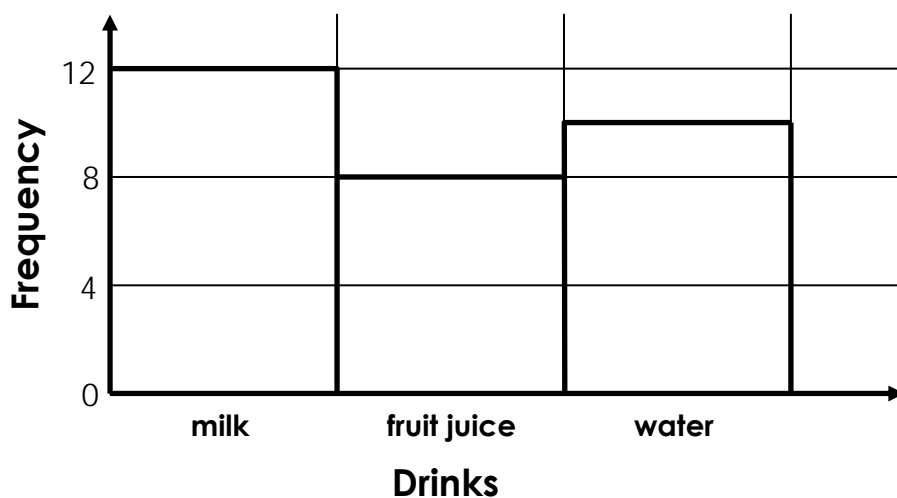
(ii) We had rain everyday.   ☐   ☐

(iii) The weather was mostly windy in March.   ☐   ☐

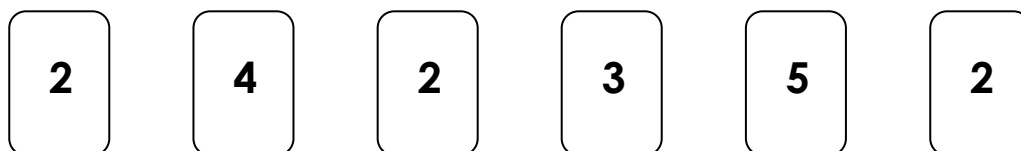14. b) This bar chart shows the favourite drinks of a class of students.

(i) Students like to drink _____ most.

(ii) How many students like water?

Answer _____

(5 marks)

15. Brandon closes his eyes and picks a card from the following:

| 2 | 4 | 2 | 3 | 5 | 2 |

a) What is the probability that he picks:
   (i)   a   2?   Answer _____
   (ii) a   3?   Answer _____
   (iii) a multiple of 2?   Answer _____
   (iv) an odd number?   Answer _____

b) It is (certain, likely, unlikely, impossible) that Brandon picks a 6.

(5 marks)

END OF PAPER