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

FORM 3 **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 25 marks**
- **Calculators and protractors are NOT ALLOWED**

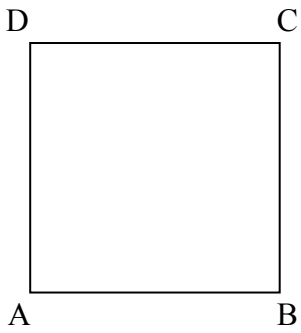
1. Fill in the missing boxes:

kilometres	1 km	$\frac{1}{2}$ km	$\frac{1}{5}$ km
metres	1000		

kilogram	1 kg	0.6 kg	0.9 kg
gram		600 g	

(3 marks)

2. a) ABCD is a square. Measure side AB.
Give your answer correct to 1 decimal place.



side AB = _____cm

b) Work out the perimeter of square ABCD.

Ans: _____cm

(2 marks)

3. Complete the following calculation:

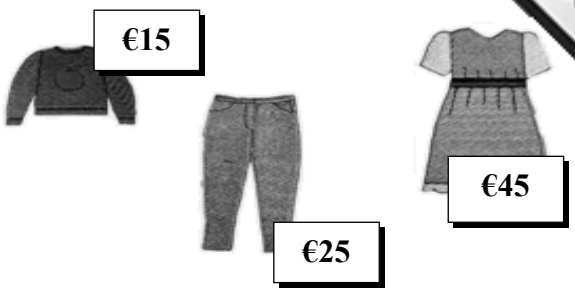
$347 \times 3 = (300 \times 3) + (\_\_\_ \times 3) + (7 \times \_\_\_\_) = \_\_\_\_\_$

(2 marks)

Name: _____ **Class:** _____

4. Vanessa bought these clothes from a shop.

a) How much did she spend in all?



Ans: €_____

b) What change did she get from a €100 note?

Ans: €_____

(2 marks)

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5. a) Complete the pattern:

1,	5,	9,	13,	_____,	_____,
1st	2nd	3rd	4th	5th	6th

b) The difference between each term is _____.

c) The 9th term is _____ .

(3 marks)

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6. a) Simplify: $4a - 2 + 6a + 5$

Ans:_____

b) Solve the equation: $6p = 30$.

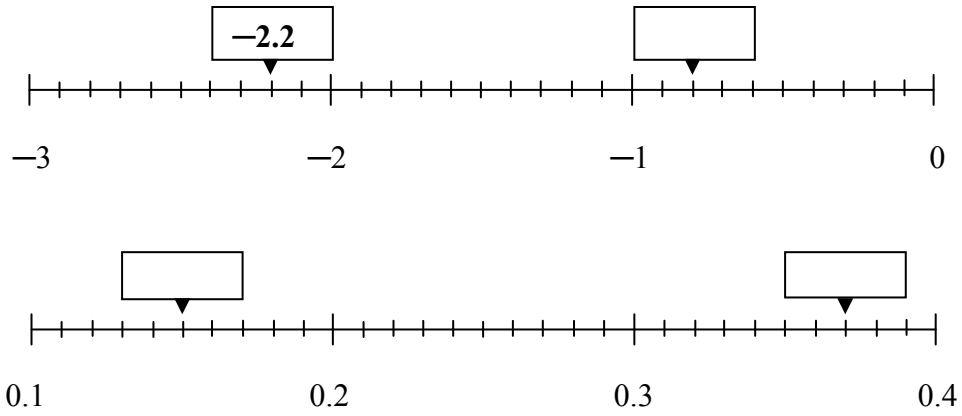
Ans:_____

c) Work out the value of $4x$ when $x = 5$.

Ans:_____

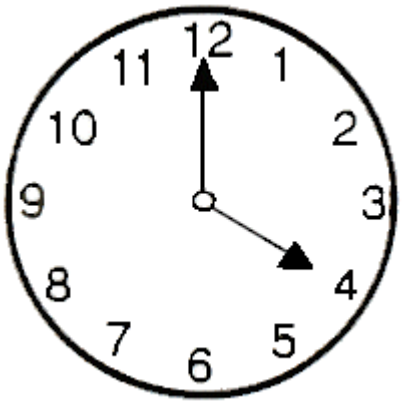
(3 marks)

7. Write the values the arrows are pointing to.



(3 marks)

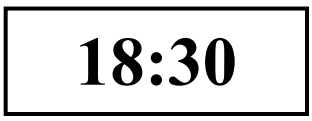
8. a) This clock shows the time early in the morning.



Everyday, Mary wakes up for school at half past seven. How much more time has she left before she gets out of bed?

Ans:_____

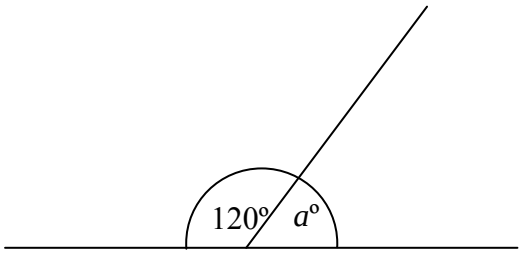
b) This digital clock shows the time in the evening. Mary has dinner 40 minutes later. At what time is dinner?



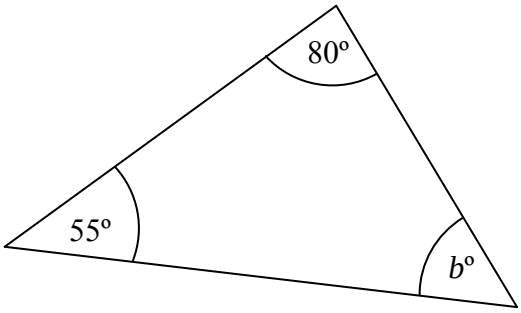
Ans:_____

(2 marks)

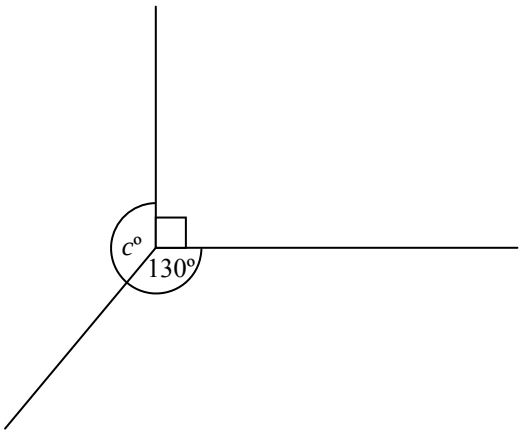
9. Work out the size of the marked angles.



a = _____ °



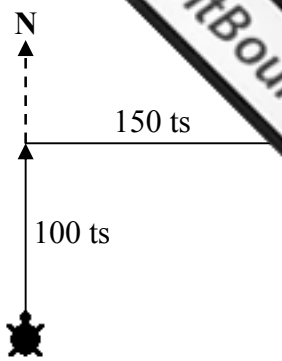
b = _____ °



c = _____ °

(3 marks)

10. A turtle walks North for 100 turtle steps, turns East and walks for another 150 turtle steps.



a) Mark on the diagram the angle through which the turtle turns.

b) What is this angle equal to? _____º

(2 marks)

End of Paper

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

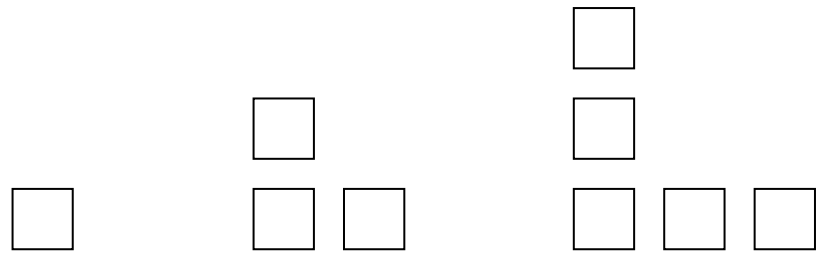
Question	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total Main	Non Calc	**Global Mark**
Mark																			

DO NOT WRITE ABOVE THIS LINE

Name: _____ **Class:** _____

CALCULATORS ARE ALLOWED BUT ALL NECESSARY WORKING MUST BE SHOWN.
ANSWER ALL QUESTIONS.

1.a) Draw the next pattern:

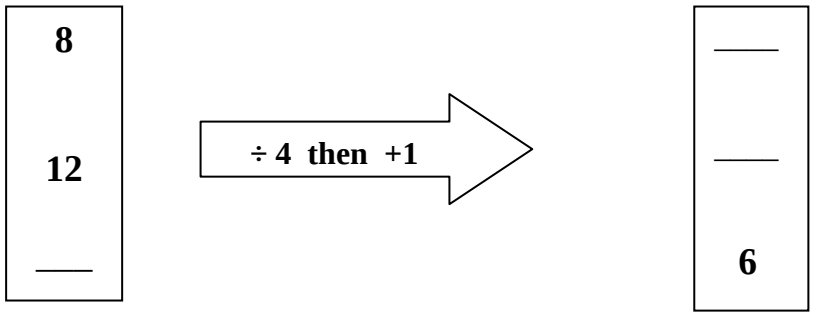


pattern 1 pattern 2 pattern 3 pattern 4

b) How many squares are there in the 5th pattern?

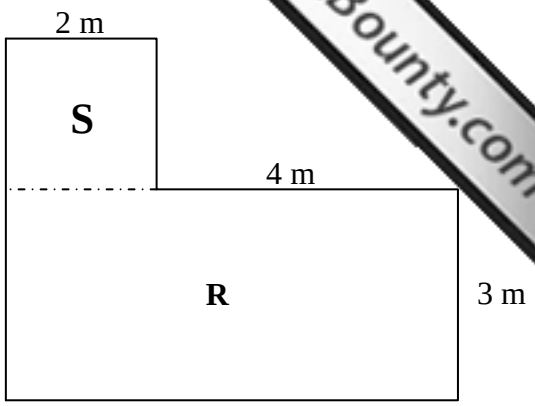
Ans_____
(4 marks)

2. Fill in the blanks to complete this number machine.



(3 marks)

3. The diagram represents a room. It can be divided into square S and rectangle R.



a) Work out the area of **square** S.

Ans_____m^2

b) Fill in: rectangle R is 3 m wide and _____ m long.

c) Work out the area of rectangle R.

Ans_____m^2

d) Work out the area of the whole room.

Ans_____m^2

(4 marks)

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4. From the set (15, 23, 32, 36, 1010), write:

a) a **prime** number _____

b) a **square** number _____

c) a **multiple** of 8 _____

d) an **odd number** which is **not prime** _____

e) the **largest** number **in words**_____

_____

(5 marks)

Name: _____ **Class:** _____

5. Put the following fractions in order, smallest first:

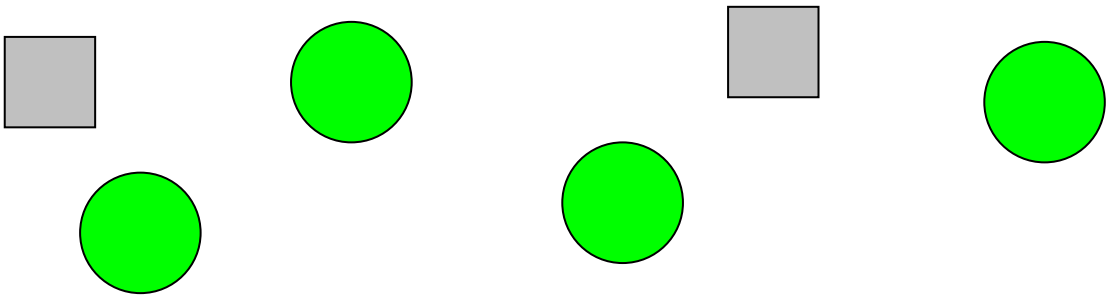
$$\frac{3}{4}, \quad \frac{4}{3}, \quad \frac{1}{3}, \quad \frac{11}{12}$$

_____ _____ _____ _____

(4 marks)

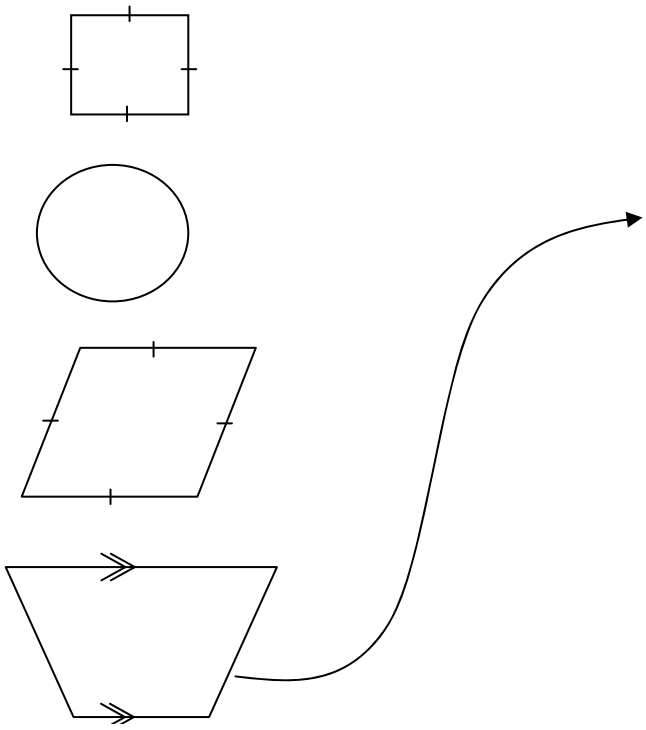
6.a) The ratio **black squares : white squares** is **1:3**. **Continue the pattern**.

b) Fill in the ratio: squares : circles = _____:_____



Write the ratio in its simplest form. _____:_____ (4 marks)

7. Match the following shapes with the correct name:



CIRCLE

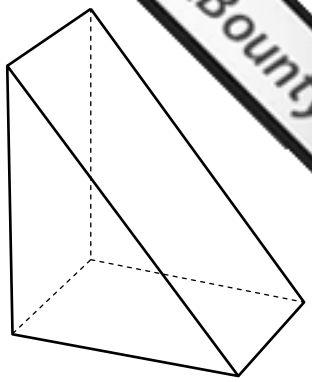
TRAPEZIUM

SQUARE

RHOMBUS

(4 marks)

8. Look at the **solid** and complete the following:



a) It has _____ **faces**.

b) It has _____ **edges**.

c) The shape of _____ of its faces is a **triangle**.

d) The shape of the other **three** faces is a _____.

(6 marks)

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9. A number of children were asked what fruit they like best.

FRUIT	FREQUENCY
Apple	4
Banana	5
Orange	2
Pear	3
Plum	1

a) Find the total number of children asked. _____

b) How many children chose bananas? _____

How many children chose pears? _____

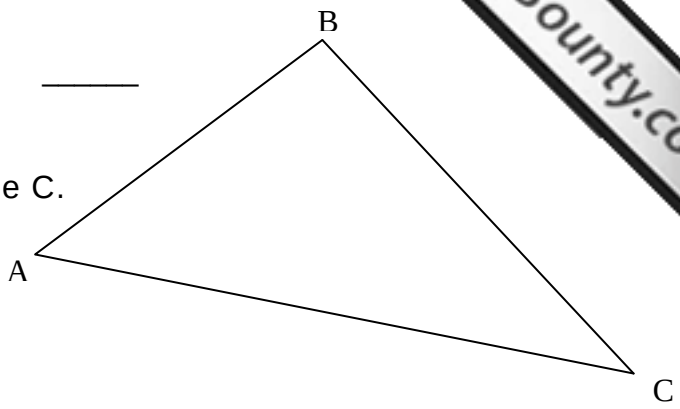
c) Put the fruit in order of popularity starting with the **least** popular.

_____ _____ _____ _____ _____

d) Which is the mode? _____

(5 marks)

10. The diagram shows triangle ABC.



a) Which is the largest angle A, B or C? _____

b) Use your protractor to measure angle C.

$\angle C =$ _____°

c) Complete :

$\angle A + \angle B + \angle C =$ _____°

(5 marks)

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11. a) Give a rough estimate for: $108.5 \div 24.01$

Ans:_____

b) Use your calculator to work out the value of: $108.5 \div 24.01$
correct to 1 decimal place.

Ans:_____

c) Write down the difference between your answer in (a) and that in (b).

Ans:_____

(6 marks)

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12. a) Fill in:

10c = [%] **of €1** 67c = [%] **of €1**

b) How much is (i) 20% of 150 kg?

Ans:_____

(ii) ½ of 36.52m?

Ans:_____

(6 marks)

13. A 1 litre jug is full of water. I fill one glass. How much water is left in the j

220 cc

a) What is the total number of glasses that can be filled from one jug? _____

b) How much water is left in the jug? _____cm^3 (3 marks)

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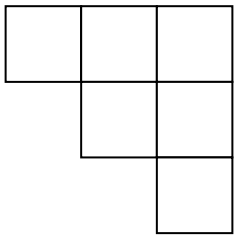
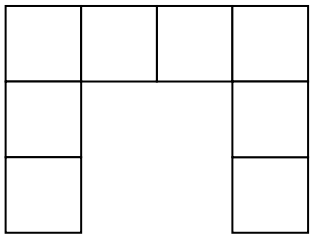
14. **Match** each shape to its correct description.
Each square measures 1 cm by 1cm.

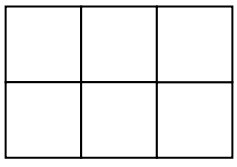
a) area 6 cm^2, perimeter 10 cm



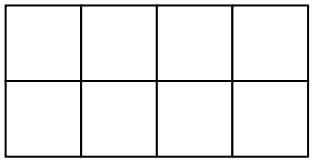
b) area 8 cm^2, perimeter 18 cm



c) area 8 cm^2, perimeter 12 cm

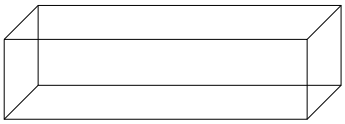


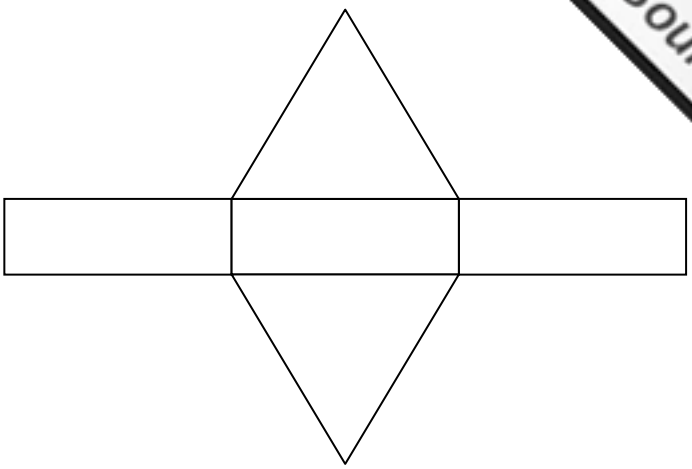
d) area 6 cm^2 , perimeter 12 cm

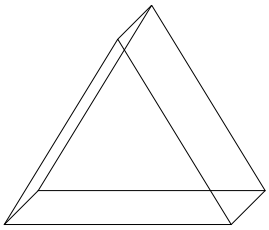


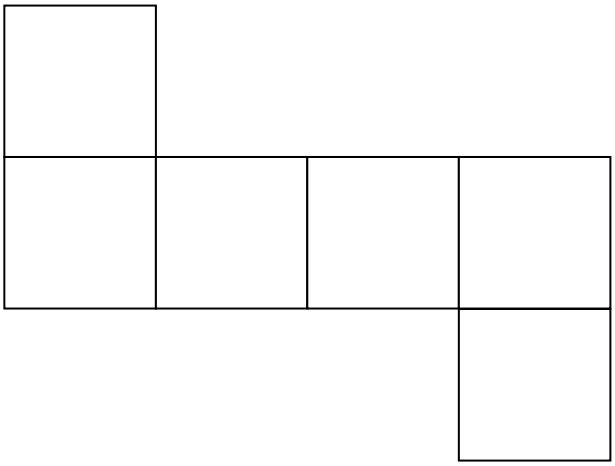
(4 marks)

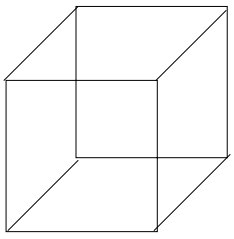
15. Match shape to its net.

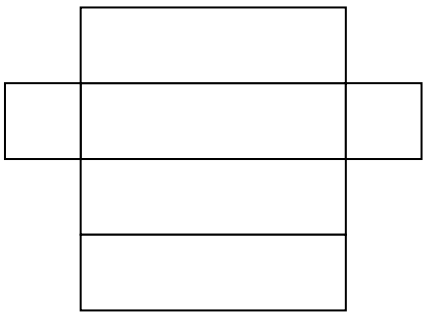












(3 marks)

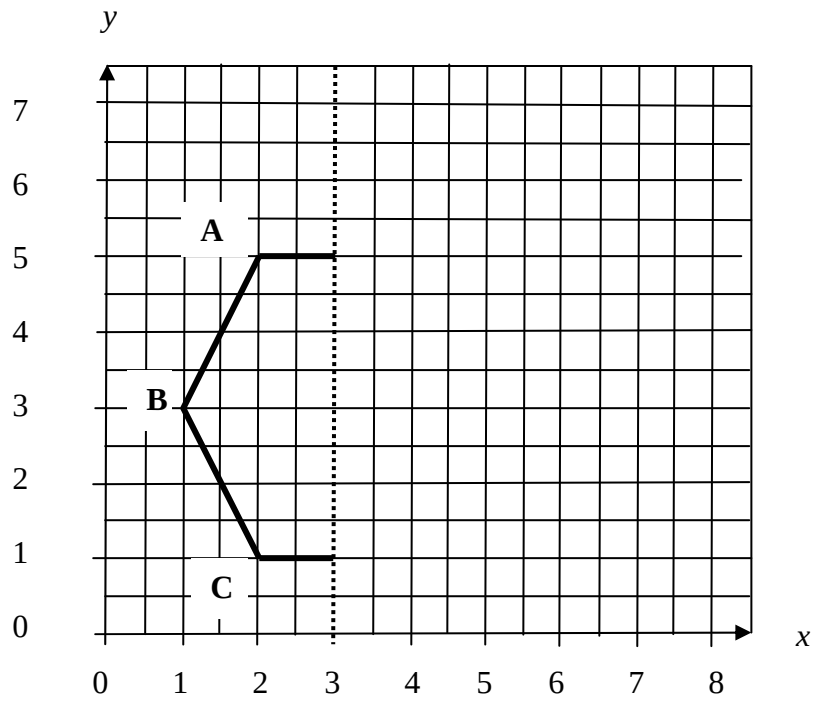
16.a) A dice is thrown at random. What is the probability that

i) it lands on a 4? _____

ii) it lands on an odd number? _____

iii) it lands on a number **less than 5**? _____

b)



i) Write down the **coordinates** of point **A** in the diagram above. (____,____)

ii) **Reflect** the shape in the dotted line.

(9 marks)

End of Paper