DIRECTORATE FOR QUALITY AND STANDARDS IN EDUCATION
Department for Curriculum Management and eLearning
Educational Assessment Unit
Annual Examinations for Secondary Schools 2013

D

FORM 3 MATHEMATICS SCHEME D TIME: 30 minutes
Non Calculator Paper

Name:_____ **Class:**_____

1	2	3	4	5	6	7	8	9	10	Total

Instructions to Candidates

- **Answer ALL questions.**
- **This paper carries a total of 25 marks.**
- **Calculators and protractors are NOT ALLOWED.**

1. Work out:

a) (3 + 4) – 2 = _____

b) (9 – 7) + (8 – 4) = _____

(2 marks)

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2. Follow the rule and continue the sequence.

a) The sequence is **ADD 3**.

5, 8, 11, ___,____

b) The sequence is **MINUS 5**.

100, 95, 90, ____, ____

(2 marks)

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3. Work out:

a) **½** of €1 = _____cent

b) **¼** of €1 = _____cent

(2 marks)

Name: _____ **Class:** _____

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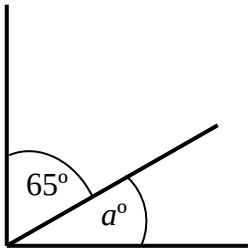
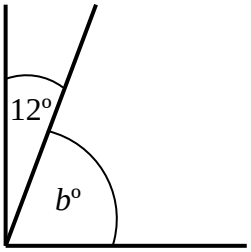
4. These are **right angles** divided into two. Each **right angle** is 90º. Work out (do not measure) the value of the unknown angle.





a = _____ *b* = _____

(2 marks)

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5. Find '100 less than' and '100 more than' to complete the table below.

– 100		**+ 100**
	115	**215**
	331	
	728	

(3 marks)

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6. Emma bought a tin of beans for 19c and a loaf of bread for 54c.

a) How much did she pay in all?

Ans: _____c

b) Work out the change she gets from €2.

Ans: _____

(2 marks)

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7. This tally chart shows the drinks sold on a Saturday morning.

DRINK	TALLY	FREQUENCY
Coffee	𝍸 𝍸 𝍸 I	16
Tea	𝍸 𝍸 III	
Milk	𝍸 III	
Juice	𝍸 II	
Water	𝍸 𝍸 𝍸	

a) **Fill in** the last column.

b) Which drink was the **most popular**? _____

c) Which drink was the **least popular**? _____

d) What was the **total number** of drinks sold? _____

(4 marks)

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8. Solve the equations.

a) $10 + p = 12$

b) $3t = 36$

$p =$ ____

$t =$ ____

(3 marks)

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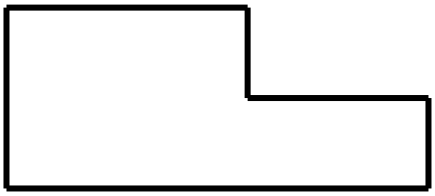
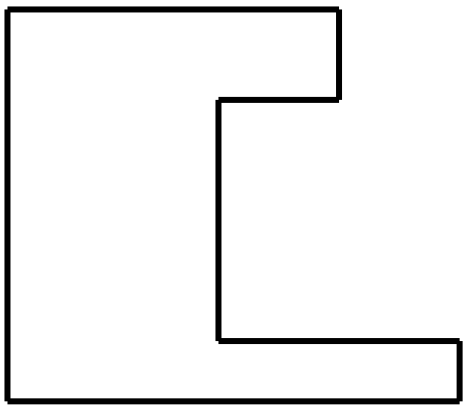
9. Use your ruler and pencil to divide these shapes into **rectangles**.



Number of rectangles is ____



Number of rectangles is ____

(2 marks)

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10. Round these prices to the nearest euro.

Object	Price	To the nearest euro
SCARF 	€10.74	
JEANS 	€35.49	
SKIRT 	€47.09	

(3 marks)

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

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total Main	Non Calculator	GLOBAL MARK

DO NOT WRITE ABOVE THIS LINE

Name: _____ **Class: _____**

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

1. Put these amounts in order, starting with the smallest:

a) **€0.90, €0.40, €0.60**

_____, _____, _____

b) **1.25 kg, 2.40 kg, 1.15 kg, 2.04 kg**

_____, _____, _____,_____

(2 marks)

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2. Complete the table below.

	Is it a multiple of 3?	Is it a factor of 30?	Is it a prime number?
5	No		
6		Yes	
12			No

(4 marks)

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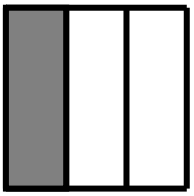
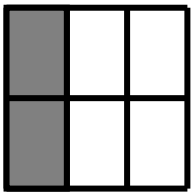
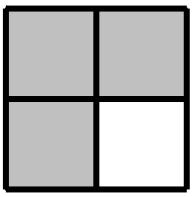
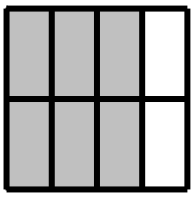
3. Complete the following:

a) $\frac{1}{3}$ =  =  = $\frac{\quad}{6}$

b) $\frac{3}{4}$ =  =  = $\frac{\quad}{\quad}$

(3 marks)

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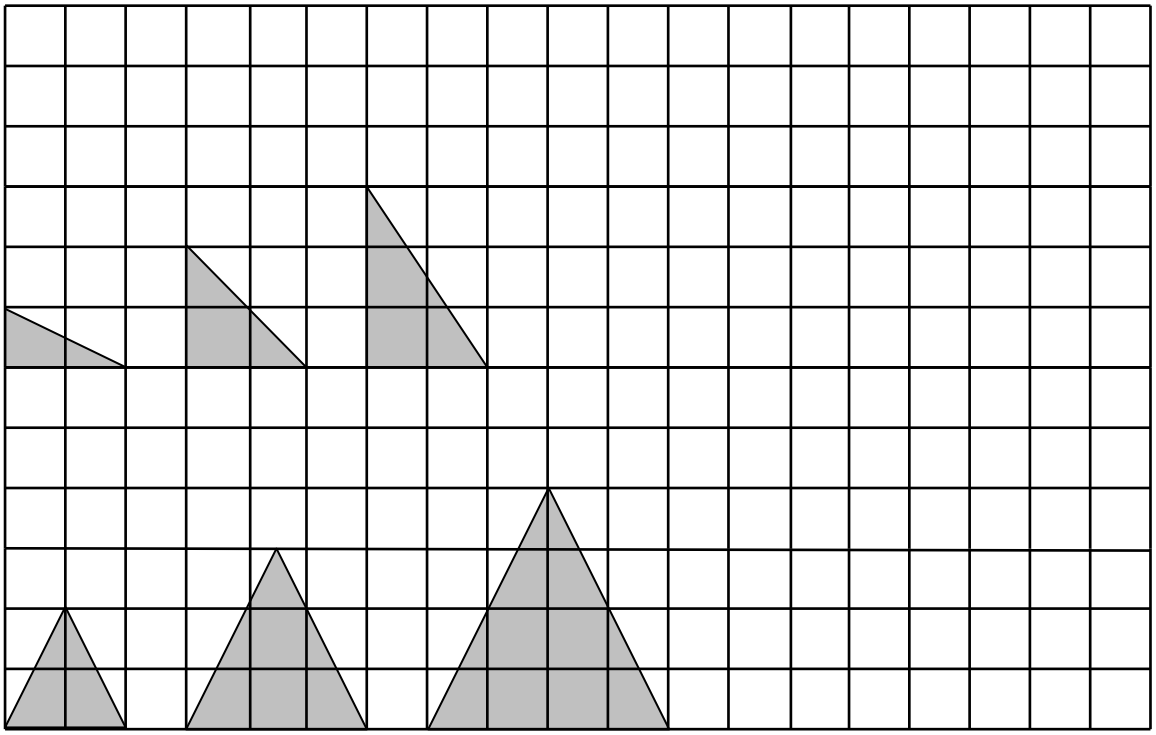
4. Draw the next pattern in each row:



(6 marks)

Name: _____ **Class:** _____

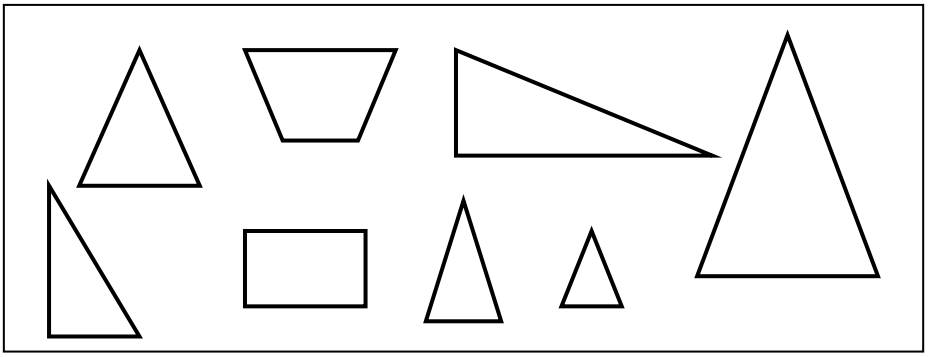
D

5. a) Mary and Paul share 20 chocolate cakes in the ratio 2: 3. How many cakes do they each have?

Mary gets _____ cakes

Paul gets _____ cakes

b)



Fill in:

(i) There are ____ **right-angled triangles** in the diagram.

(ii) There are ____ **isosceles triangles** in the diagram.

(iii) Complete:

number of **quadrilaterals** : number of **triangles** =

_____ : _____ **SIMPLIFYING** → _____ : _____

(6 marks)

6. a) Last Monday, 97% of the students were present. What percentage of the students were **absent**?

Ans: Students absent: _____%

b) Work out 10% of 20 kg.

Ans: _____kg

c) Write 50% as a fraction. **Simplify** your answer.

Ans: 50% = _____

(6 marks)

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7. **Simplify**:

a) $3b + 2b =$ _____

b) $8x - 3x =$ _____

c) $2y + 3z - z + 3y =$ _____

(4 marks)

Name: _____ **Class:** _____

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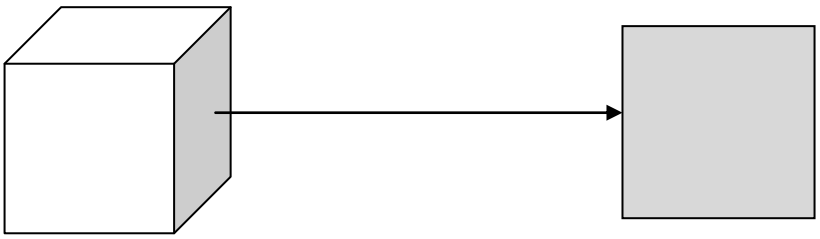
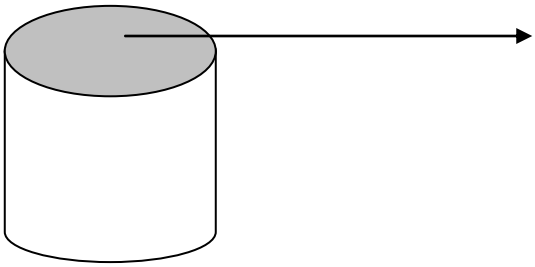
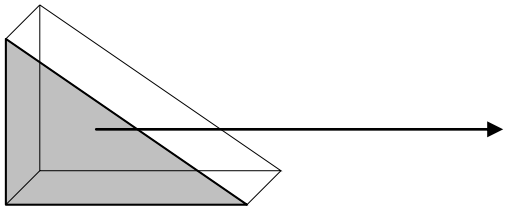
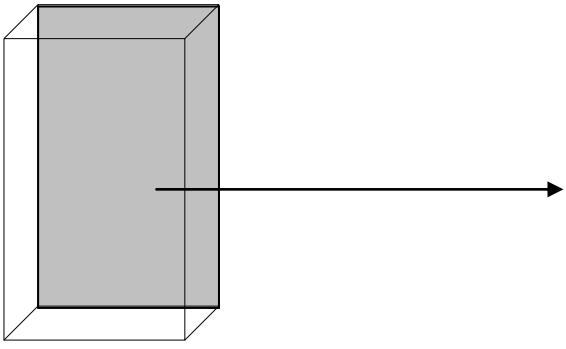
8. Draw the shape of the **shaded face** shown.
(The first one is done for you.)





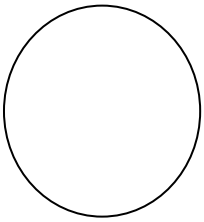




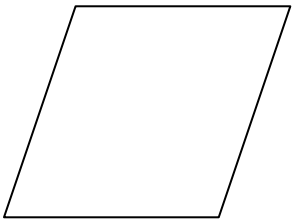
(6 marks)

9. Match the following:

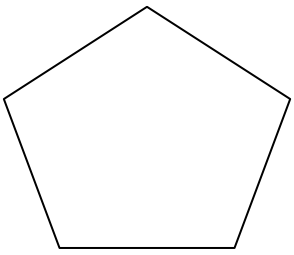
Has no sides



4 angles of 90º



Has 5 sides



Opposite sides parallel

(6 marks)

10. Complete the following function machines:

a)

b)

(4 marks)

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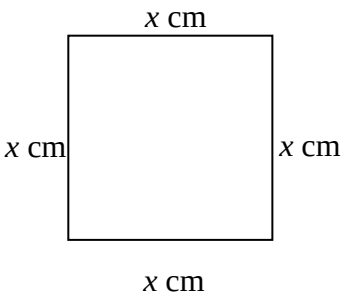
11. a) Mark has *m* marbles and wins 4. How many marbles does Mark have now? **Underline the correct answer**.

Mark now has **$4m$** **$m + 4$** **$m - 4$** marbles.

b) Each side of a square is *x* cm long.
What is the perimeter equal to?



Ans: Perimeter is _____ cm

c) Work out the value of $2\boldsymbol{b} + \boldsymbol{c}$ when $b = 4$ and $c = 7$.

Ans: $2\boldsymbol{b} + \boldsymbol{c}$ = ____

(6 marks)

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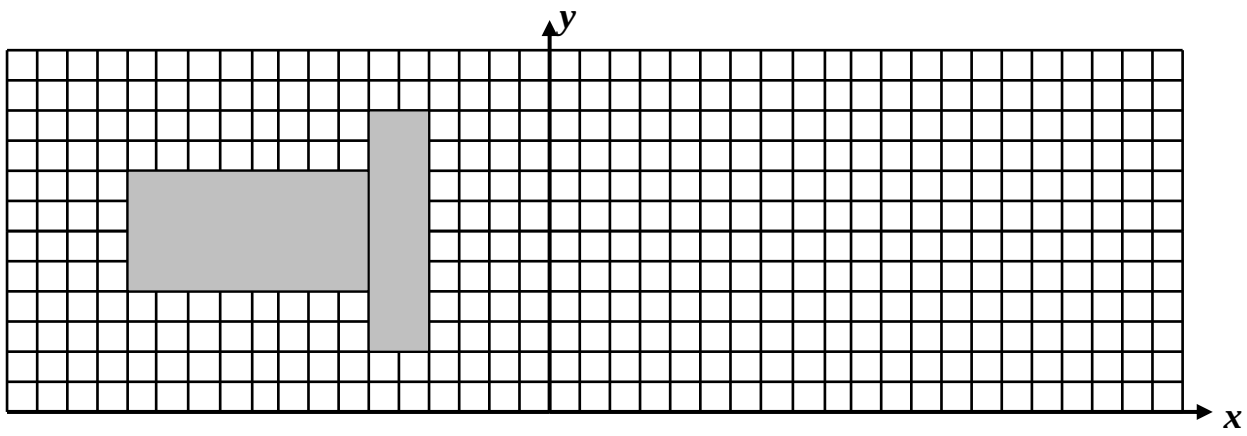
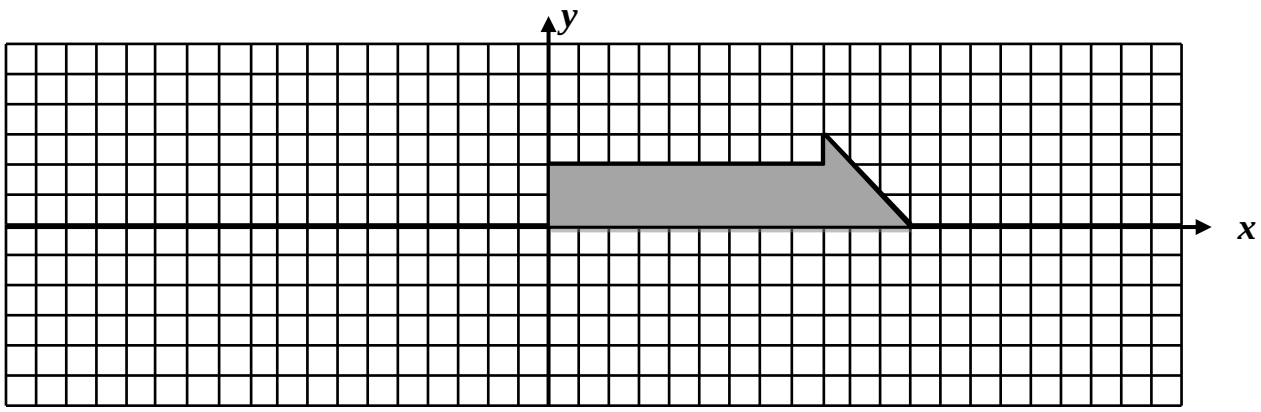
12. a) Draw the reflection of the shape in the *y*-axis.



b) (i) **Both** the *x*- and the *y*-axis are lines of symmetry in the grid below. Complete the diagram.



(ii) The area of the given shaded figure is 22.5 cm^2. What is the total area of the complete diagram?

Ans: Total area is _____ cm^2

(8 marks)

13. Read the statement and **tick** the correct probability.

	IMPOSSIBLE	POSSIBLE	CERTAIN
Thursday will follow Wednesday.			✓
It will be dark tomorrow night.			
Tomorrow you will see a dinosaur at school.			
You will go to the sea this summer.			
It will rain during summer.			

(4 marks)

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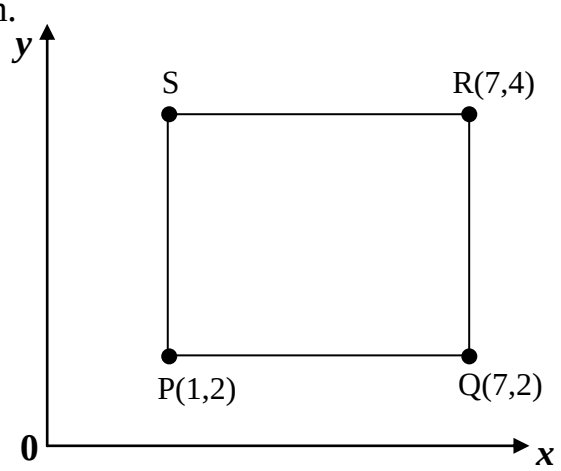
14. Look at this diagram.



a) X is half way between points P and Q. What are the coordinates of point X?

Ans: Point X = (,)

b) Shape PQRS is a **rectangle**. What are the coordinates of point S?

Ans: Point S = (,)

(4 marks)

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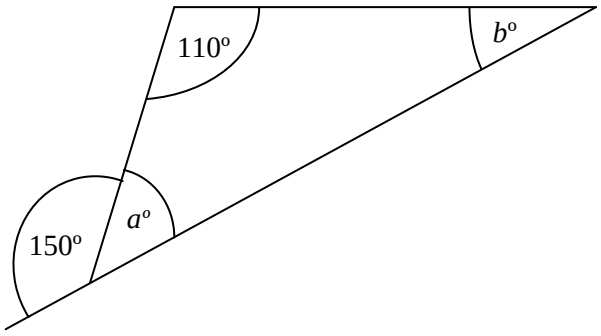
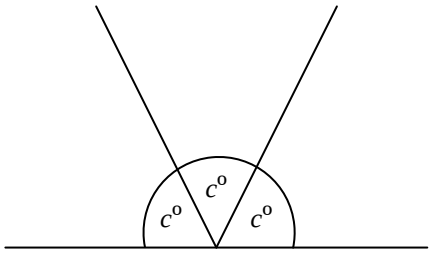
15. Work out the angles marked with letters in the diagrams below.



Ans: a^o = _____ °, b^o = _____ °



Ans: c^o = ___ °

(6 marks)
