

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. Complete the following sequences:
 - a) 5, 8, 11, ____, ____
 - b) 20, 18, 16, ____, ____

(2 marks)

2. Complete the following:

a)
$$\frac{1}{2} = \frac{1}{4}$$

b)
$$\frac{1}{3} = \frac{3}{3}$$

(2 marks)

3. Work out:

a) 20% of €5 b) 50% of 1000 ml

Ans: a) \notin _____ b) ____ ml (2 marks)

Name: C	
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4. The marks obtained by 10 students in a test are shown below:

6, 8, 4, 6, 9, 3, 5, 6, 2, 7

What is a) the mode?

b) the mean?

Ans: a) _____b)____

(3 marks)

5. Complete the following:

a) 4 × 10 = ____

b) $(4 \times 6) + 8 =$ _____

(2 marks)

6. On the clocks below put the times given.



(2 marks)



8. Simplify: 4y + 9x - 3y + 10y - 2x + 5

Ans: _____

(3 marks)

9. Work out the marked angles.



10. Put these numbers in order of size starting with the smallest.

4.0, 0.40, 0.44, 4.4, 44





FORM 3 **MATHEMATICS SCHEME D** TIME: 1h 30min **Main Paper** GLOBAL Total Non 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 Main Calculator 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: b) How many squares are there in the 5th pattern? c) Which pattern consists of 50 squares? Ans: b) c) (3 marks) 2. Round a) 23 to the nearest 10. b) 86 to the nearest 100._____ c) €53.77 to the nearest euro. d) $\in 21.11$ to the nearest 10c. (4 marks)

3. a) Work out:

(i) $2p - q$ when $p = 2$ and $q = 8$.	
	Ans:
(ii) $11 + (x - y)$ when $x = 10$ and $y = 4$.	
b) Solve the equation $2r + 3 = 13$	Ans:
b) borve the equation $2x + 3 = 15$.	
	Ans:
	(5 marks)

4. a) Each shirt needs 6 buttons. How many buttons are needed for 7 shirts?

- b) There are 24 toffees in a packet. Mary ate half of the packet while John ate one third.
 - (i) How many toffees did Mary eat?
 - (ii) How many toffees did John eat?
 - (iii) How many are left?

Ans: (i)_____(ii)_____(iii)_____

Ans:

(6 marks)





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5. Find the ratio of:a) triangles to hexagons:	$ \land $
b) triangles to circles: Simplified ratio is:	
	(3 marks)
 6. State TRUE or FALSE. a) The angles in a square are all equal b) A quadrilateral has 4 sides c) The sum of the angles of a triangle is 3 	 60°
7. The diagram represents a set of numbers. From this set write down:	(3 marks)
a) the factors of 12,	
b) the multiples of 5,,	4
c) the prime numbers,	

8. Write the rule for each of the following sequences.

a) 0, 4, 8, 12. The rule is <u>ADD 4.</u>
b) 6, 8, 10, 12, 14. The rule is ______.
c) 5, 10, 15, 20, 25. The rule is ______.
d) 10, 8, 6, 4, 2, 0. The rule is ______. (3 marks)

9. Match the following shapes with the correct name:



- 10. a) Draw the lines of symmetry of the following shapes.
 - b) Shade half of each shape.



11. Points A, B and C are plotted on the grid.

a) Write the coordinates of A, B and C.

y

A = ()

B = ()

C = ()

- b) Now plot the point (4, 5). Label it D.
- c) Join A to B, B to C, C to D and D to A.
- 7 A 6-B 5 -4 3. 2 С 1_ 0 3 $\dot{2}$ $\dot{4}$ 0 5 Ġ Ż 8 x
- d) What is the name of the shape formed?
- e) Draw its line of symmetry.

(7 marks)

12. Match the following cards.



(3 marks)Page 5 of 8 13. A number of children were asked about their favourite fruit. The information collected is shown in the bar chart below.



Favourite fruit

- a) How many children chose apple?
- b) Which is the most popular fruit?
- c) Put the fruit in order of popularity, starting with the least popular.

d) How many children took part in the survey?

(6 marks)

- 14. a) Translate the L-shape shown by6 squares to the right and 1 square upwards.Label it B.
 - b) Now reflect B in the dotted line. Label it C.



15. The table shows the coins in a bag.

Number of Coins Coin 10 cent 3 20 cent 4 2 50 cent

- a) How many coins are in the bag?
- b) Paul pulls out a coin without looking. What is the probability that the coin is:

(i) a 10 cent?

(ii) a €1?

Ans: (i) (ii)

Ans: ____

(3 marks)

16. There are 18 students in a class. One third of the students study French and one half study Italian.

a) Complete the	e table above to	show the number	of students s	tudying each
language.				

b) What fraction of the whole class study Spanish?

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Language

Ans: b) _____

French Italian Spanish

Number of students





17. a) A field is in the form of a rectangle. It measures 25 m by 20 m. What is the perimeter?

Ans:_____

b) A stone is in the form of a cuboid. It is 45 cm long, 25 cm high and 15 cm thick. Work out its volume.

Ans:	\cm^3
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c) Sarah pays €4.50 to travel to work each week. She works for 45 weeks. How much does it cost her?

Ans:_____

(6 marks)