	SECONDARY SCHOOL ANNUAL EXAMINAT Directorate for Quality and Standards in Educati Educational Assessment Unit	rions 2009
FORM 5	MATHEMATICS SCHEME C Non-Calculator Paper	TIME: 20 minutes
Name:		Class:
	Mark	

INSTRUCTIONS TO CANDIDATES

- Answer all questions. There are 20 questions to answer.
- Each question carries 1 mark.
- Calculators, protractors and other mathematical instruments are not allowed.
- You are not required to show your working. However space for working is provided if you need it.

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No	OUESTION	SPACE FOR WORKIN
1	QUEDITOIN	(IF REQUIRED)
1.	Work out: $13 + 6 \times 2$. Ans	
2.	The exterior angle of a regular polygon is 60°. The polygon has:	
	A) 4 sides B) 5 sides C) 6 sides D) 8 sides.	
	Ans	
3.	Write down a multiple of 5 between 61 and 79.	
4.	Simplify: $1 - \frac{2}{5}$.	
	Ans	
5.	Find 5% of €60.	
	Ans €	
6.	What is the value of 3.75 ÷ 100? Ans	
7.	In a football league, my team won 50% of the matches and drew 38%. What percentage of the matches did it lose?	
	Ans	
8.	The diameter of a circle is 13cm. What is the length of its radius?	
	Ans	
9.	Given that $y = 3x - 2$, what is the value of y when $x = 4$?	
	Ans	

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No.	QUESTION	SPACE FOR WORKI (IF REQUIRED)
10.	The turtle starts at the position shown. It draws the given figure for this set of LOGO commands: PD FD 50 LT 90 FD 50 PU HOME. Choose the correct missing command from: A) RT 90 B) FD 100 C) LT 90 D) BK 100 Ans	*
11.	Pamela was using a spreadsheet to work out the simple interest for one year on \in 500 at 2% per annum. In cell A1 she typed 500 for the principal. In cell A2 she typed 2 for the rate. In cell A3 she typed 1 for the time. Choose the correct formula that Pamela would type in cell A4 to obtain the value of the simple interest. A) = A1*A2*A3 B) = A1*A2*A3/100 C) = A1*A2*A3*100 D) = (A1 + A2 + A3)/100 Ans	
12.	D C The area of the rectangle ABCD is 35cm ² . If BC is 5cm long, what is the length of AB? A B Ans	
13.	Ten students obtained the following marks in a test: 33, 34, 45, 45, 56, 56, 62, 62, 62, 75. What is the mode in this set of marks? Ans	
14.	A book costs €23.50. What is the cost of 4 similarbooks? Ans	

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No.	QUESTION	SPACE FOR WORKI (IF REQUIRED)
15.	What fraction of the whole figure is the shaded part?	
	Ans	
16.	Simplify: $\frac{1}{2} + \frac{1}{4}$. Ans	
17.		
18.	Change $2\frac{3}{8}$ to an improper fraction.	
19.	Yesterday the temperature in Oslo at 9:00 pm was -5° C. At midnight, the temperature was -12° C. By how much did the temperature fall? Ans	
20.	The length of a rectangle is 20 cm and the width is 10 cm. The semicircle has an area of 157 cm ² correct to 3 significant figures.	
	Choose the correct answer for the shaded area. A) 200 cm^2 B) 157 cm^2 C) 43 cm^2 D) 357 cm^2 . Ans	

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3. a) Fill in the blank space to write down a fraction equivalent to $\frac{3}{4}$:

$$\frac{3}{4} = \frac{1}{8}$$

b) Work out the value of
$$\left(\frac{3}{4} - \frac{1}{8}\right) \times 16$$
.

c) A group of 12 children share 72 biscuits **equally** among them. How many biscuits does each child get?

4. a) Write down the next two terms in these number patterns:

- (i) 20, 17, 14, 11, ____, ____.
- (ii) 3, 6, 12, 24, ____, ____.
- b) Use the formula P = 20 3n, to find the value of P when n = 20.

- 5. a) Factorise completely: 6x 36.
 - b) Expand: 7(2x 3).
 - c) Expand and simplify: 6(x-6) 7(2x-3).

(7 marks)

(6 marks)

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(5 marks)

	Students
Name	ClassCountry
	3

6. Paul used a spreadsheet to calculate the perimeter of a rectangle of length 24cm and breadth 15.5cm.

	А	В	С
1	Length in cm	24	
2	Breadth in cm	15.5	
3	Perimeter in cm		
4	Area in cm ²		

- a) One of these formulae can be used by Paul in cell B3 to obtain the perimeter of the rectangle. Which one is it?
 - (i) = B1 + B2 (ii) = B1 + B2 * 2
 - (iii) = B1 * 2 + B2 (iv) = (B1 + B2) * 2.
- b) Work out the value for the perimeter of the rectangle that is obtained in cell **B3**.
- c) Finish the formula for the area of a rectangle that can be used in cell B4 and calculate the area of the rectangle.

=____*____

(6 marks)



7. a) Solve the equation 3a - 7 = a + 11.

b)

(4x + 5) cm = (3x + 8) cm

The equal sides of an isosceles triangle are (4x + 5) cm and (3x + 8) cm.

- (i) Use the above information to form an equation, in terms of x, for the equal sides of the triangle.
- (ii) Solve this equation to find the value of x.

(iii) Use this value of x to work out the length of **one** of the equal sides of the triangle.

(8 marks)



A

(6 marks)



The figure shows a regular 8-sided figure with one of its exterior angles. The formula to find the sum of the interior angles is $(n - 2) \times 180^{\circ}$ where *n* is the number of sides.

a) Calculate the sum of all the interior angles.

b) The size of **one** of its interior angles.

c) The size of one **exterior** angle.

d) Underline the correct name of the 8-sided figure:

pentagon, hexagon, octagon, nonagon.

(7 marks)

- 10. Give your answers correct to the nearest whole number.
 - a) Work out the area of a circle of radius 12 cm.

- b) A square is drawn in a circle of radius 12 cm as shown in the figure. The side of the square is 17 cm, correct to the nearest whole number. Calculate the area of the square.
- c) Work out the shaded area in the given figure.

(6 marks)

- 11. Maria wants to know her telephone bill for the past 2 months. There is a service charge of €5.50 **per month**.
 - a) Work out the bill for Maria.

Service charge for 2 months = _____

120 phone calls at 12c each = _____

24 mobile calls at 32c each =

TOTAL = _____

b) How much is this amount less than \notin 50?

(6 marks)





c) Calculate the sum of **all interior angles** of the figure ABEDC.

(7 marks)

13. In a school there are 675 students. All of them voted for one student in an election for the School Students' Council. The table shows the result.

Student	Simon	John	Paul	Charles	Daniel	Alan
Votes	100	150	50	125		75

- a) How many students voted for Daniel?
- b) Show this information on the histogram by shading the columns.



End of Examination

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