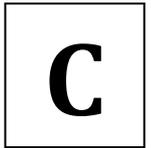


KULLEĠĠ SAN BENEDITTU



Boys Secondary School, Kirkop

HALF-YEARLY EXAMINATIONS – FEBRUARY 2013

FORM 4

**MATHEMATICS** Scheme C

TIME: 20 mins

Non Calculator Paper

Question	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	
Mark																						

DO NOT WRITE ABOVE THIS LINE

NAME AND SURNAME: \_\_\_\_\_

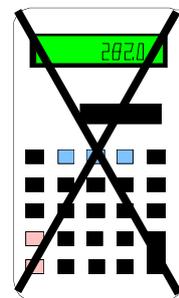
CLASS: \_\_\_\_\_

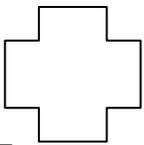
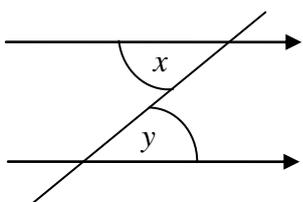
INDEX: \_\_\_\_\_

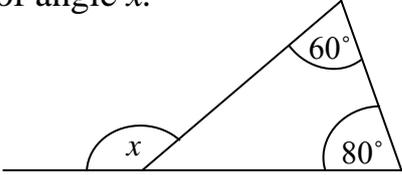
INSTRUCTIONS TO CANDIDATES:

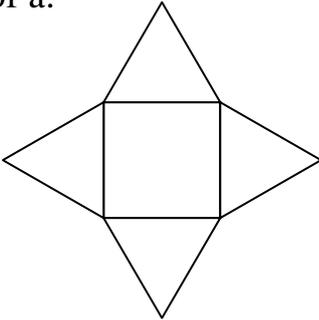
Read all the questions carefully before you start answering.

- Answer all questions.
- This paper carries 20 marks.
- **Calculators, protractors** and other mathematical instruments are **NOT ALLOWED**.
- On your desk you should have nothing except for **pen, pencil, ruler** and the **examination paper**.
- You are not required to show your working. However, space for working is provided if you need it.



No.	QUESTION	SPACE FOR WORKING (IF REQUIRED)
1.	Find the value of $3.6 \times 10^3$  Answer: _____	
2.	John has rope 2.5 metres long. He cuts off 80cm of it. What length of rope is left?  Answer: _____ cm	
3.	Work out: $-12 + 7$  Answer: _____	
4.	Which of these fractions is equivalent to 75%?  A) $\frac{1}{75}$ B) $\frac{3}{4}$ C) $\frac{50}{100}$ D) $\frac{5}{7}$  Answer: _____	
5.	How many 20cent coins are there in €3?  Answer: _____	
6.	Write down a <b>square</b> number between 60 and 70  Answer: _____	
7.	The order of rotational symmetry of this shape is: A) 1   B) 2   C) 4   D) 6  Answer: _____ 	
8.	Angles $x$ and $y$ are: A) Corresponding angles B) Alternate angles C) Vertically opposite angles  Answer: _____ 	

9.	Write down the least common multiple of 4 and 6  Answer: _____	
10.	At a concert there are 500 people. 30% of these people are male. The rest are female. Find the <b>number</b> of females at the concert.  Answer: _____	
11.	Find the value of $20 - 6x$ when $x = 2$  Answer: _____	
12.	Sandra sells hand-made cards in packets of 100. Each packet costs €35. How much does 1 card cost?  Answer: _____	
13.	Work out the value of angle $x$ .   Answer: _____	
14.	The following numbers show the mass of five people in a gym: 52kg , 68kg, 71 kg , 59kg , 70kg  Work out the <b>mean</b> mass.  Answer: _____	

15.	<p>The diagram shows the net of a:</p> <p>A. triangular prism</p> <p>B. square-based pyramid</p> <p>C. cuboid</p> <p>D. triangular-based pyramid</p> <div style="text-align: center;">  </div> <p style="text-align: center;">Answer: _____</p>	
16.	<p>Estimate the value of <math>289 \times 46</math>.</p> <p style="text-align: center;">Answer: _____</p>	
17.	<p>Find the value of <math>y</math> if <math>y \times 1000 = 725</math></p> <p style="text-align: center;">Answer: _____</p>	
18.	<p>Work out the value of <math>5y^3</math> when <math>y = 2</math>.</p> <p style="text-align: center;">Answer: _____</p>	
19.	<p>Which of the following numbers is prime?</p> <p style="text-align: center;">9    17    25    100    33</p> <p style="text-align: center;">Answer: _____</p>	
20.	<p>How many <math>250 \text{ ml}</math> glasses can be filled from a <math>2 \text{ l}</math> bottle of water?</p> <p style="text-align: center;">Answer: _____</p>	



2. Fill in to make the correct calculations:

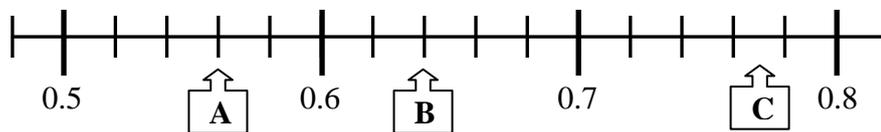
(a)  $\boxed{-5} + \boxed{\phantom{00}} = \boxed{-3}$

(b)  $\boxed{\phantom{00}} - \boxed{7} = \boxed{-6}$

(c)  $\boxed{\phantom{00}} \times \boxed{-9} = \boxed{90}$

(3 marks)

3. (a) Write down the values of A, B and C on the diagram.



A = \_\_\_\_\_ B = \_\_\_\_\_ C = \_\_\_\_\_

(b) Write the following numbers in **ascending** order.

20.5 , 3.04 , 2.5 , 3.4 , 34.5 , 2.05 : \_\_\_\_\_

(6 marks)

4. (a) Work out  $\frac{1}{4}$  of 3.2 litres (Give your answer in *ml*).

Answer: \_\_\_\_\_ *ml*

(b) A jug contains 3.2 litres of water. Amanda drinks  $\frac{1}{4}$  of it.  
How much water is **left** in the jug? (Give your answer in *l*)



Answer: \_\_\_\_\_ *l*

(5 marks)

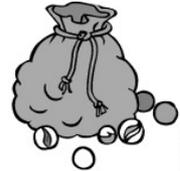
5. (a) 17 out of 25 children own a pet. What percentage is this?

Answer: \_\_\_\_\_%

- (b) Change 40% to a fraction in its **lowest terms**.

Answer: \_\_\_\_\_

- (c) Simon has a bag of 30 marbles.  
20% of these marbles are green. The rest are yellow.  
How many **yellow** marbles does Simon have?



Answer: \_\_\_\_\_

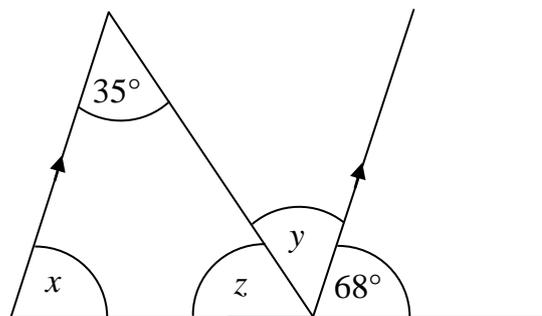
(6 marks)

6. Work out the size of the lettered angles.

(a)  $x =$  \_\_\_\_\_ $^{\circ}$

(b)  $y =$  \_\_\_\_\_ $^{\circ}$

(c)  $z =$  \_\_\_\_\_ $^{\circ}$



(4 marks)

7. (a) From the grid choose:

(i) a square number \_\_\_\_\_

(ii) a prime number \_\_\_\_\_

(iii) a multiple of 9 \_\_\_\_\_

(iv) a factor of 12 \_\_\_\_\_

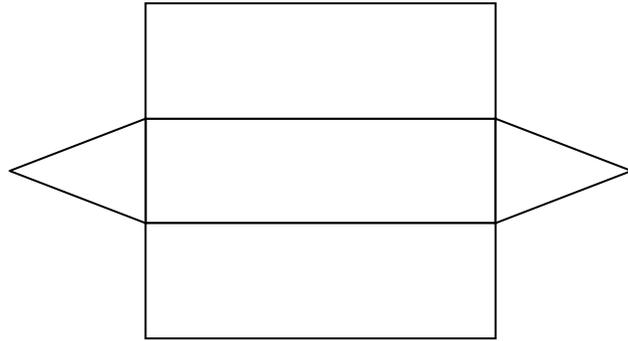
20	24	27	13
6	5	30	15
100	26	64	48
50	7	14	21

- (b) Find the value of  $3^3 + 5^2$ .

Answer: \_\_\_\_\_

(6 marks)

8. Brian is drawing the nets of solid shapes.



(a) The above shows the net of a \_\_\_\_\_.  
( cuboid , cube , triangular prism , pyramid )

(b) Draw the net of a cube sides 2 cm.

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(5 marks)

9. John buys **four** muffins for €4.20 and **one** drink for €0.75.

Find the cost of:

(a) one muffin



Answer: € \_\_\_\_\_

(b) three muffins and 2 drinks

Answer: € \_\_\_\_\_

(7 marks)

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10. The following numbers show the amount of pocket money given to 6 children.

€5.60      €7.50      €4.50      €6.80      €5.00      €7.50

(a) Work out the **mean** value.



Answer: € \_\_\_\_\_

(b) Find the **mode**.

Answer: € \_\_\_\_\_

(c) Work out the **range**.

Answer: € \_\_\_\_\_

(6 marks)

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11. (a) One thousand sheets of paper are 84mm thick. How thick is one sheet?

Answer: \_\_\_\_\_ mm

(b) What is the value of  $y$  if  $y \div 10^2 = 32$ ?

Answer: \_\_\_\_\_

(4 marks)

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12. Dino's Car Rentals use the following formula to calculate the price for renting a car.

$$\text{Price} = \text{number of hours} \times 4 + 10$$



(a) How much will it cost to rent the car for:

(i) 6 hours

Answer: € \_\_\_\_\_

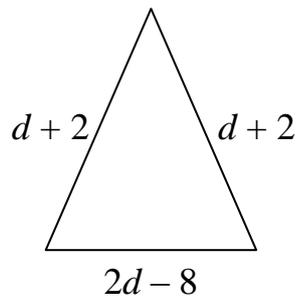
(ii) 2 days

Answer: € \_\_\_\_\_

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(5 marks)

13.



(a) This is \_\_\_\_\_ triangle.  
(an equilateral, an isosceles, a scalene)

(b) Write an **expression** for the **perimeter** of the triangle.

Answer: P = \_\_\_\_\_

(c) If  $d = 6$ , work out the perimeter of the triangle.

Answer: P = \_\_\_\_\_

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(5 marks)

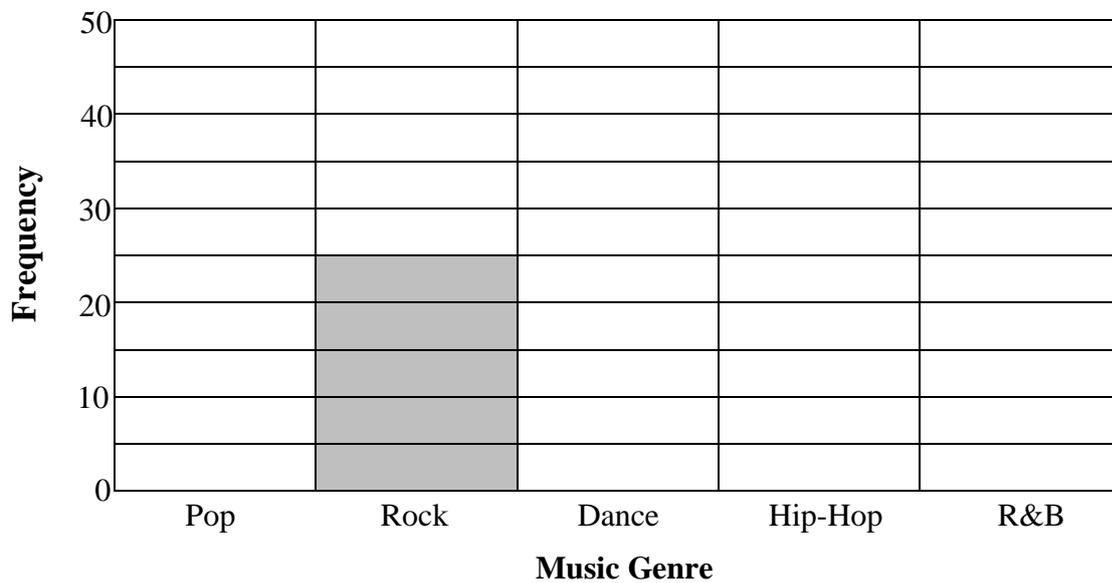
14. 135 persons were asked to name their favourite music genre. The table of results and the bar chart are incomplete.

Music Genre	Pop	Rock	Dance	Hip-Hop	R&B	Total
Frequency	10		50		15	135

- (a) **Complete** the table above.



- (b) Use the table to complete the following bar chart.



- (c) Which is the modal music genre?

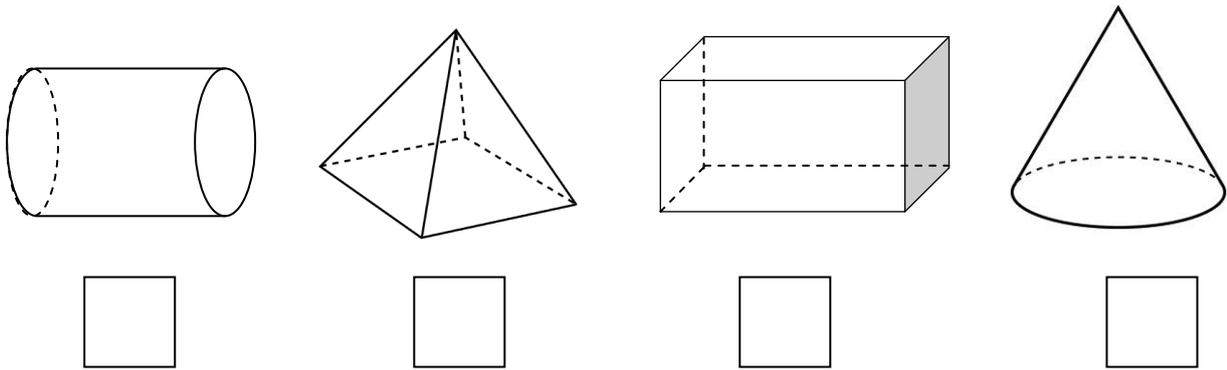
Answer: \_\_\_\_\_

- (d) What **fraction** of people prefer rock?  
Give your answer in its simplest form.

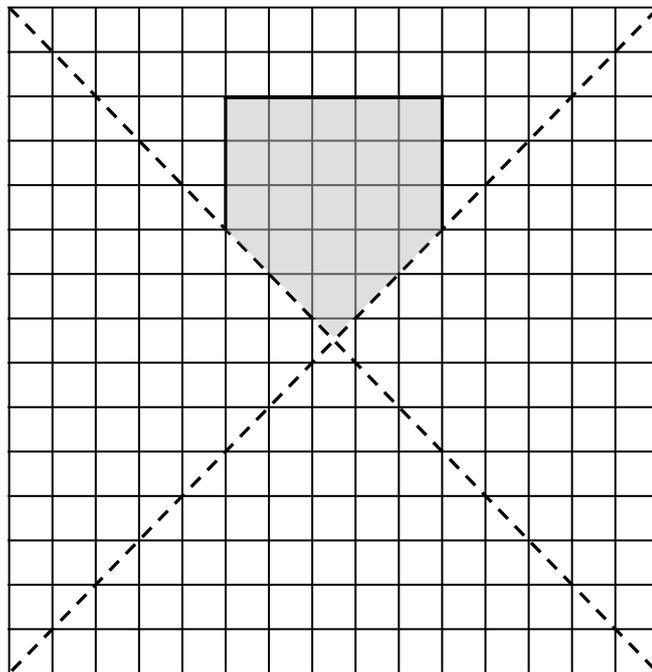
Answer: \_\_\_\_\_

(9 marks)

15. (a) Tick (✓) the shapes which have a **uniform cross-section**.



(b) Complete the diagram below so that the dotted lines are lines of symmetry.



(c) Write down the order of **rotational symmetry** of this shape.

Answer: \_\_\_\_\_

(7 marks)

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**END OF PAPER**

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