

KULLEGG SAN BENEDITTU Secondary School, Kirkop

Mark

HALF YEARLY EXAMINATION – 2016/2017

Track 1

FORM 4

MATHEMATICS

TIME: 20 mins

Non Calculator Paper

Mark

DO NOT WRITE ABOVE THIS LINE

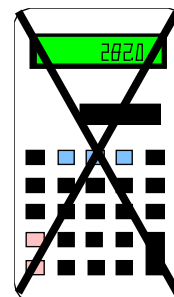
Name: _____

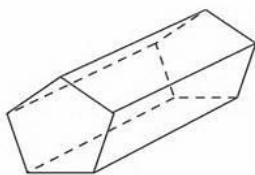
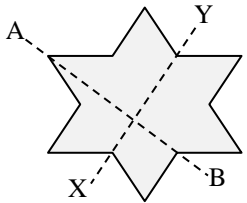
Class: _____

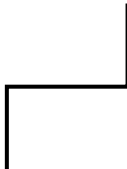
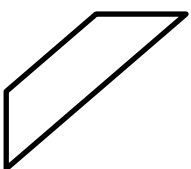
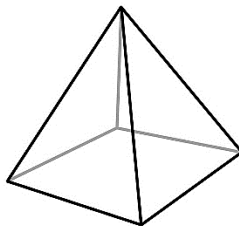

INSTRUCTIONS TO CANDIDATES:

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**.
- You are not required to show your working. However, space for working is provided if you need it.

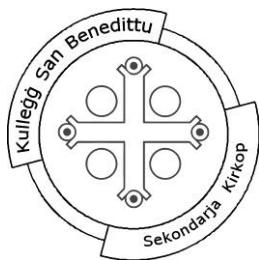


No.	Question	Space for Working
1.	<p>Work out:</p> 320×50 <p>Answer: _____</p>	
2.	<p>Round 7 582 843 to the nearest million.</p> <p>Answer: _____</p>	
3.	<p>Simplify:</p> $5a - 2b + 8 - 2a + 3b$ <p>Answer: _____</p>	
4.	<p>Write down the value of 4 in the number 94 239.</p> <p>Answer: _____</p>	
5.	<p>The cross-section of this shape is:</p> <p>A) a rectangle B) a triangle C) a prism D) a pentagon</p>  <p>Answer: _____</p>	
6.	<p>Continue this pattern:</p> $0.23, 0.25, 0.27, 0.29, \underline{\hspace{2cm}}$ <p>Answer: _____</p>	
7.	 <p>Which line, AB or XY, is the correct line of symmetry of this shape?</p> <p>Answer: Line _____</p>	
8.	<p>Work out:</p> <p>a) $\sqrt{16}$ b) 3^3</p> <p>Answer: a) _____ b) _____</p>	

No.	Question	Space for Working
9.	Change 6230 m into kilometres . Answer: _____ km	
10.	Work out: $140 - 90 + 60$ Answer: _____	
11.	Which one of these numbers is not a square number? A) 100 B) 80 C) 1 D) 64 Answer: _____	
12.	Which one of these shapes has rotational symmetry of order 2 ? <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>(A)</p> </div> <div style="text-align: center;">  <p>(B)</p> </div> </div> Answer: _____	
13.	Simplify: $2m \times 4n$ Answer: _____	
14.	<div style="display: flex; align-items: center;">  <div style="margin-left: 20px;"> How many faces does a square-based pyramid have? Answer: _____ </div> </div>	
15.	A paper clip is 28 mm long. Mark this length on the scale with an arrow . 	

No.	Question	Space for Working
16.	<p>Write 0.42 as a percentage.</p> <p>Answer: _____%</p>	
17.	<p>Simplify the ratio:</p> <p>24 : 12 : 40</p> <p>Answer: _____ : _____ : _____</p>	
18.	<p>Write 65% as a fraction, giving your answer in its simplest form.</p> <p>Answer: _____</p>	
19.	<div data-bbox="331 846 970 1527" data-label="Image"> </div> <p>The height of the mast of the small yacht is 3 m.</p> <p>Estimate the height of the mast of the large yacht.</p> <p>Answer: _____m</p>	

END OF NON-CALCULATOR PAPER



KULLEGG SAN BENEDITTU

Secondary School, Kirkop

Mark

HALF YEARLY EXAMINATION – 2016/2017

Track 1

FORM 4

MATHEMATICS

TIME: 1 hr 40 min

Main Paper

Question	1	2	3	4	5	6	7	8	9	10	11	12	13	Main	NC	Global Mark
Max. Mark	5	6	8	6	6	4	6	4	4	9	4	9	9	80	20	100
Mark																

DO NOT WRITE ABOVE THIS LINE

Name: _____

Class: _____

INSTRUCTIONS TO CANDIDATES:

Read all the questions carefully before you start answering.

- Answer all questions.
- This paper carries 80 marks.
- Calculators and mathematical instruments are allowed but all necessary working must be shown.

1. a) Which number is **greatest** 25.62, 25.26 or 25.6?

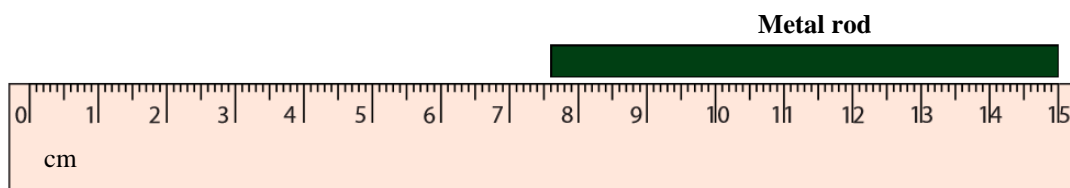
Answer: _____

b) Put these in order of size, **smallest first**:

10.17 10.8 10 10.22 10.06

Answer: _____

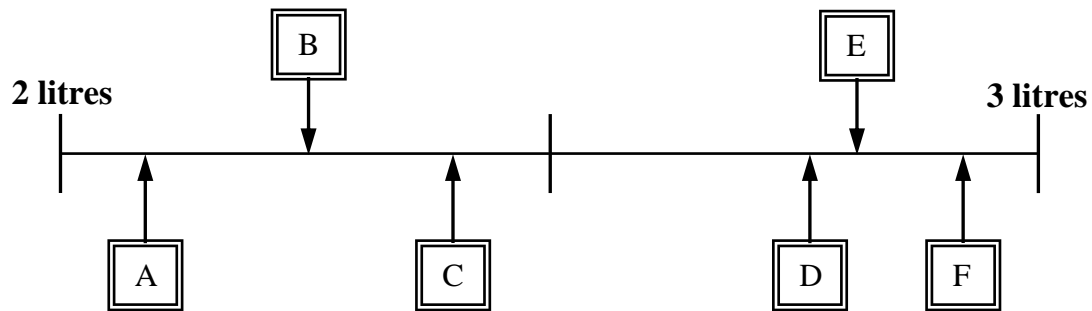
c) Use the diagram below to **work out** the **length** of this metal rod.



Answer: _____ cm

(5 marks)

2. Six capacities are marked with letters on the scale below.



a) Match each letter to one of the capacities below. One is done for you.

2.4 litres

2760 cm³

2089 ml

2.83 litres

2920 cm³

2250 ml

b) Change 2.83 litres into ml.

Answer: _____ml
(6 marks)

3. a) Find the **value** of:

i) $10 + \frac{n}{2}$ if $n = 5$

Answer: _____

ii) $4r^2 - v^2$ when $r = 6$ and $v = 9$

Answer: _____

b) The price of a plane ticket from Malta to London is **€150**. In March, there is a **discount of 5%** on the price. How much does the plane ticket cost in March?

Answer: € _____
(8 marks)

4. Choose a number from those given in the box to answer the questions below :

- a) a **factor** of 30 - _____
- b) a **multiple** of 9 - _____
- c) a **prime** number - _____
- d) a **common multiple** of 3 and 7 - _____
- e) the **square root** of 16 - _____
- f) the **cube** of 2 - _____

6	11	4
42	8	54

(6 marks)

5. Mary works out some sums on her calculator. Then, she works an estimate to decide if the sum is correct or not.

Fill in the table below by:

- **Rounding** the numbers in the sums to **1 s.f.** and work an **estimate** of each sum.
- Use the estimate to check which calculator answers are correct and which are not.

Show all your working. The first one is done for you.

	Sums	Calculator answer	Rounding	Estimate	Correct/Incorrect
	608×29	17 632	600×30	18 000	Correct
a)	6004×506	403 802	_____ \times _____	_____	_____
b)	$780 \div 24$	32.5	_____ \div _____	_____	_____

(6 marks)

6. **Work out:**

- a) 6.3×10^3
- b) $987.54 \div 10^2$

Answer: a) _____ b) _____

(4 marks)

7. At a rugby match, the ratio of **children to adults** is **2 : 3**. There are **80 children** in the crowd.

a) How many adults are there?

Answer: _____ adults

b) An adult ticket costs €8. A child's ticket costs **half** as much as the adult ticket.

i) How much does a child's ticket cost?

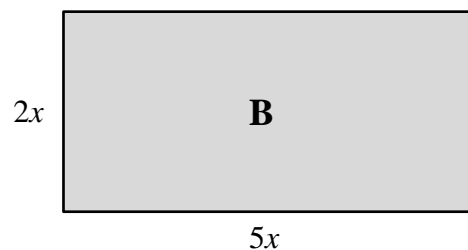
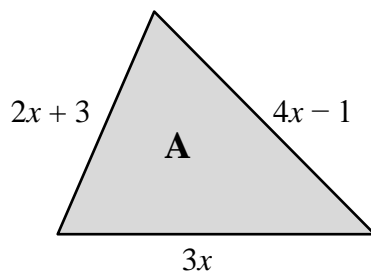
Answer: € _____

ii) Work out the **total** money made from **all** the ticket sales.

Answer: € _____

(6 marks)

8. Write, as simply as possible, an **expression** for:



a) the **perimeter** of triangle A.

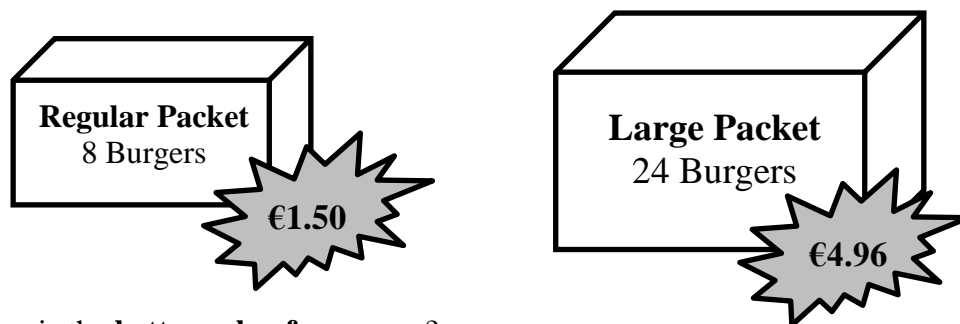
Answer: _____

b) the **area** of rectangle B.

Answer: _____

(4 marks)

9. Vegetarian burgers are sold in **two packets of different sizes**.



Which size is the **better value for money**?

Show all your working.

Answer: _____

(4 marks)

10. Use the grid to answer the question.

a) **Plot** and label the points:

A (1, 4)

B (-2, 3)

C (-2, -1)

D (1, -2)

b) **Join:**

A to B to C to D to A.

c) **Fill in:**

Shape ABCD has _____

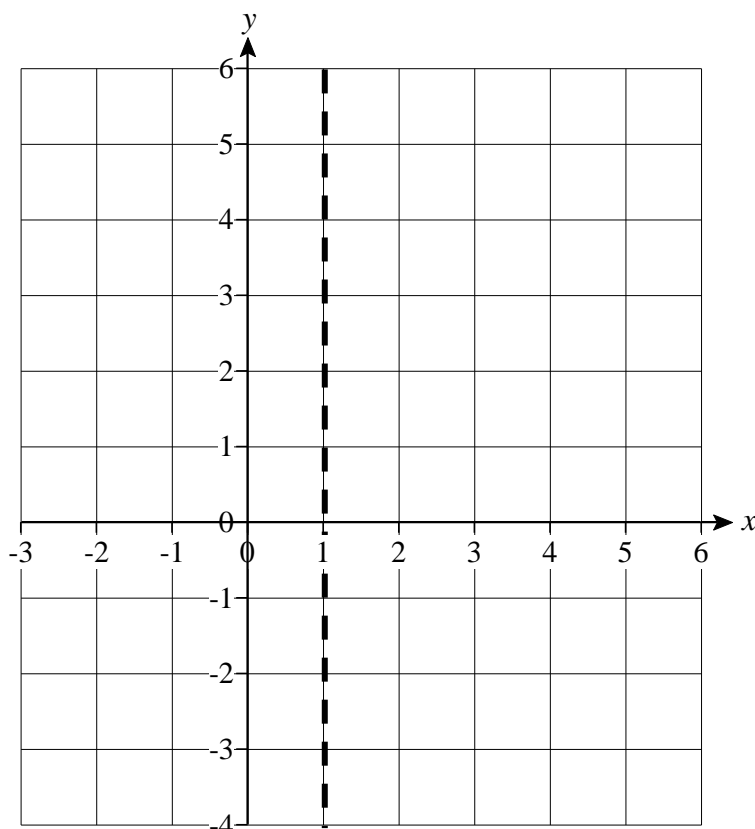
line(s) of symmetry.

d) **Underline** the correct answer:

Shape ABCD is a

(parallelogram, trapezium, rectangle).

e) **Relect** shape ABCD in the dotted line.



(9 marks)

11. Karol has 3 cards – card X, card Y and card Z.



8.1 cm

10.6 cm



9.6 cm

12 cm



7.25 cm

15.1 cm

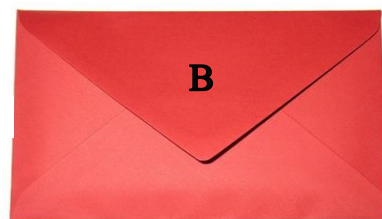
Diagrams are not drawn to scale

Karol also has 2 envelopes – envelope A and envelope B.



9.9 cm

13.3 cm



8.7 cm

16.4 cm

Diagrams are not drawn to scale

a) Which of the three cards can Karol fit in:

i) envelope **A**?

Answer: Card _____

ii) envelope **B**?

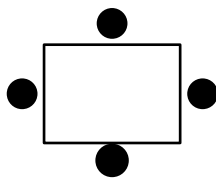
Answer: Card _____

b) Suggest a size for the envelope in which **the remaining card** (the card that you did not choose in question (a)), can fit in.

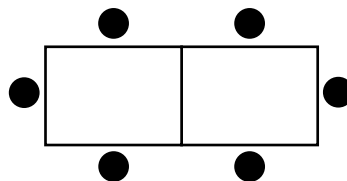
Answer: _____ cm by _____ cm

(4 marks)

12. The pattern below shows the number of people sitting around tables.



1 table



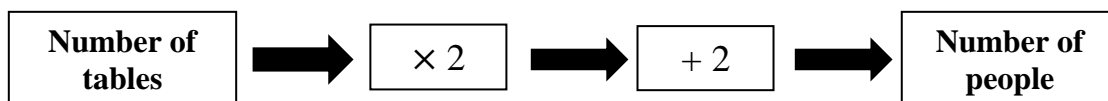
2 tables

3 tables

- a) Draw the **next pattern** using **3 tables**.
b) **Fill in** the table below.

Number of tables	1	2	3	4		7
Number of people	4	6				

- c) Use the **function machine** below to answer the following questions:



- i) How many people can be seated when **15 tables** are used?

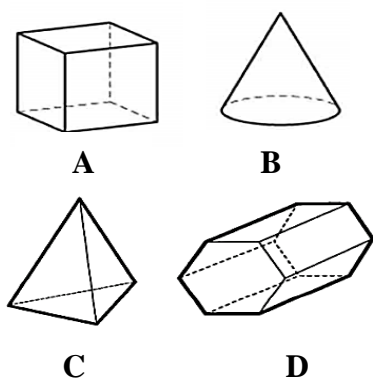
Answer: _____ people

- ii) How many tables are needed to seat **22 people**?

Answer: _____ tables

(9 marks)

13. a) Fill in the table by writing the letters of the shape under the appropriate column.

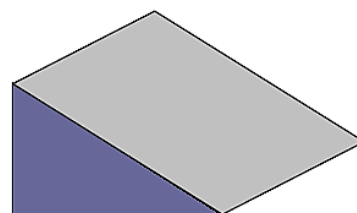


Prisms	Pyramid

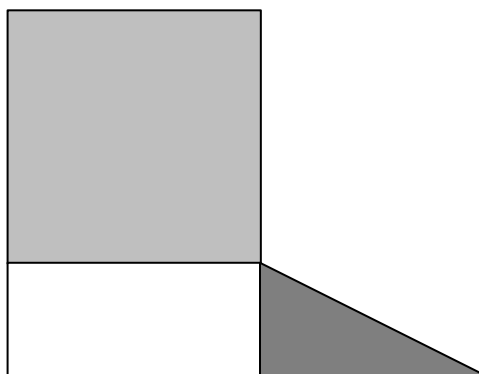
Look at the triangular prism in the diagram.

b) **Underline** the correct answers:

- i) The triangular prism is a (2D; 3D) shape.
- ii) It has (2 , 4 , 5) faces.
- iii) Its uniform cross-section is a (triangle, square, rectangle).



c) **Complete the net** of the triangular prism.



(9 marks)

END OF MAIN PAPER