

KULLEGG SAN BENEDITTU Secondary School, Kirkop

Mark

HALF YEARLY EXAMINATION – 2017/2018

Track 1

Year 10

MATHEMATICS
Non Calculator Paper

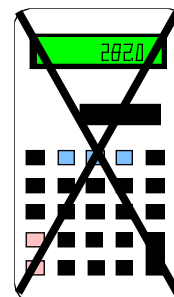
TIME: 20 mins

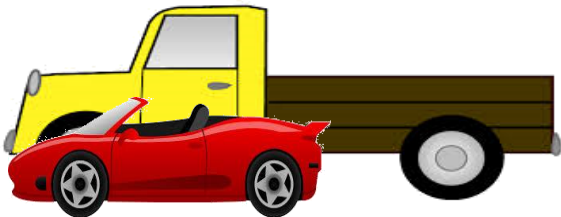
NAME: _____


CLASS: _____

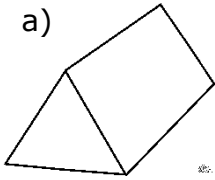

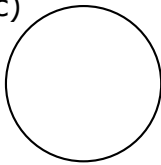
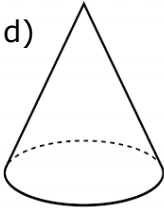
Instructions to Candidates

- **Answer all questions.**
- **This paper carries a total of 20 marks.**
- **Calculators and protractors are NOT ALLOWED.**

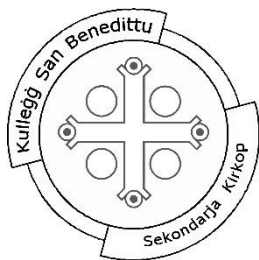


No.	Question	Space for working, if required
1	Find the number which is exactly halfway between 8.2 and 8.3 Ans: _____	
2	The length of a van is 6 m.  Estimate the length of the car. Ans: _____	
3	Which of the following is not a prime number? a) 1 b) 2 c) 3 d) 5 Ans: _____	
4	Work out: $6742 - 300$ Ans: _____	
5	Simplify the following expression: $p + 2p + p$ Ans: _____	
6	One cinema ticket costs €4.50. Work out the cost of 10 tickets. Ans: _____	
7	Choose the smallest number: a) 0.3 b) $\frac{1}{3}$ c) $-\frac{1}{3}$ d) -0.3 Ans: _____	

8	<p>Estimate the value of 281×1.9</p> <p>a) 400 b) 500 c) 600 d) 700</p> <p>Ans: _____</p>	
9	<p>A worker is paid €4.98 an hour.</p> <p>Estimate his pay after he works 49 hours.</p> <p>Ans: _____</p>	
10	<p>Draw the line of symmetry on the diagram.</p> 	
11	<p>$b \times b \times b$ is the same as:</p> <p>a) $3b$ b) $\frac{b}{3}$ c) b^3 d) $3b^3$</p> <p>Ans: _____</p>	
12	<p>Work out:</p> $10 + 4 \div 2$ <p>Ans: _____</p>	
13	<p>Work out:</p> $420 \div 4$ <p>Ans: _____</p>	
14	<p>Find the value of 4^3</p> <p>Ans: _____</p>	
15	<p>The capacity of a spoon can be measured using:</p> <p>a) cm b) m c) kg d) ml</p> <p>Ans: _____</p>	

16	<p>Which of the following shapes is a prism?</p> <p>a)  b)  c)  d) </p> <p>Ans: _____</p>	
17	<p>Work out:</p> 40×50 <p>Ans: _____</p>	
18	<p>Write down the next term:</p> <p>0.3, 0.6, 0.9, _____</p>	
19	<p>Work out:</p> $53.1 \div 100$ <p>Ans: _____</p>	
20	<p>Work out the value of $\sqrt{49}$.</p> <p>Ans: _____</p>	

END OF NON CALCULATOR PAPER



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HALF YEARLY EXAMINATION – 2017/2018

Track 1

Year 10

MATHEMATICS
Main Paper

TIME: 1 hr 40 mins

Question	1	2	3	4	5	6	7	8	9	10	11	12	13	14	Total Main	Non Calc	Global Mark
Mark																	

DO NOT WRITE ABOVE THIS LINE

NAME: _____

CLASS: _____

INSTRUCTIONS TO CANDIDATES:

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

1. a) Write down whether each of the following is **TRUE** or **FALSE**

i) 12 is a **factor** of 3 _____ Ans

ii) 16 is a **multiple** of 4 _____ Ans

iii) 5 is a **factor** of 15 _____ Ans

iv) 10 is a **multiple** of 100 _____ Ans

b) Find a **common factor** of 12 and 16

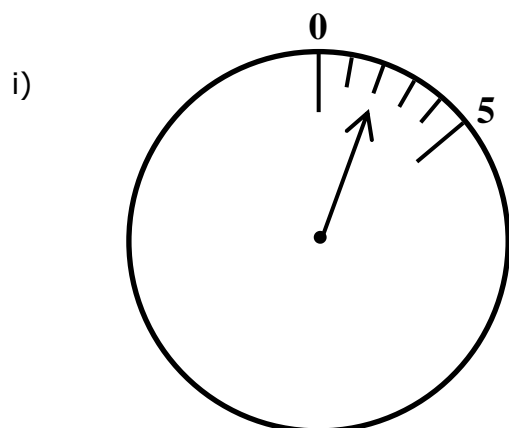
_____ Ans

c) Find a **common multiple** of 4 and 5

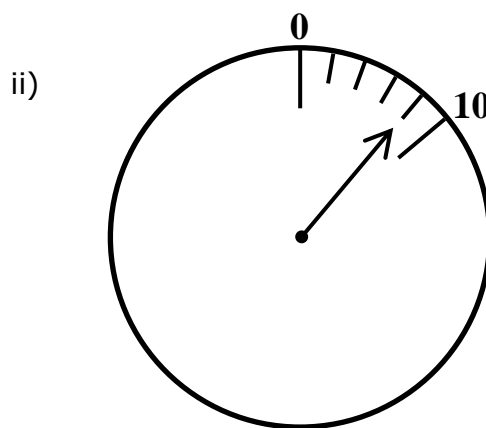
_____ Ans

(6 marks)

2. a) Fill in the **value** marked with an arrow



Ans: _____

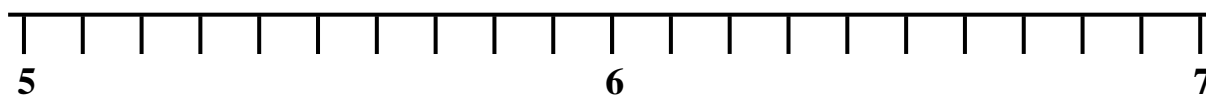


Ans: _____

b) On the number line below, **mark** with an arrow

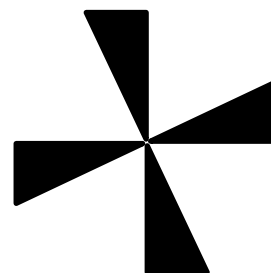
i) $A = 6.2$

ii) $B = 5.85$



(4 marks)

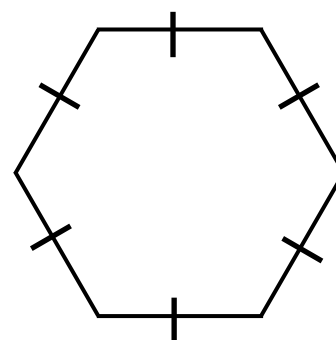
3. a) This shape has a rotational symmetry of order _____.



b) i) This shape is a _____.

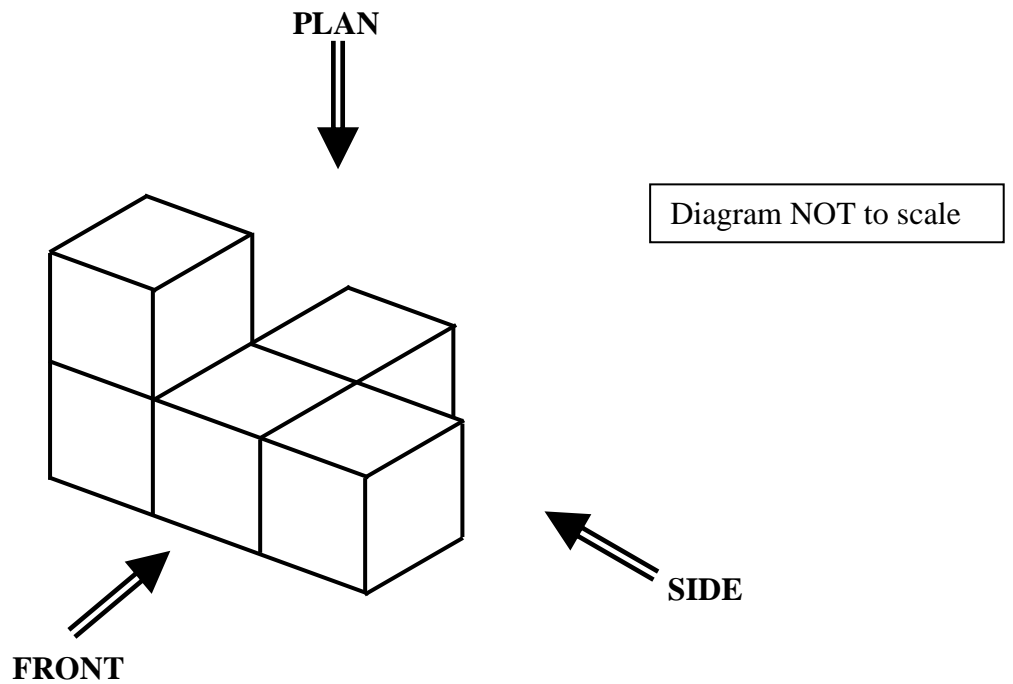
ii) This shape has _____ lines of symmetry.

iii) It is a (regular, non-regular) polygon.

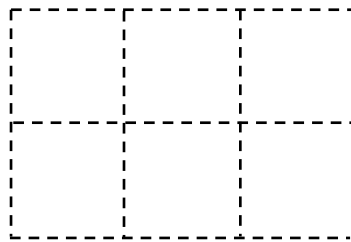


(4 marks)

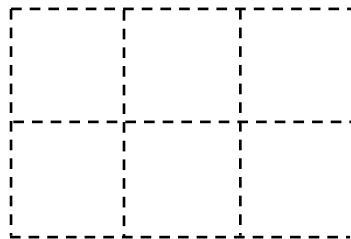
4. For the solid shown below, draw in the space provided:



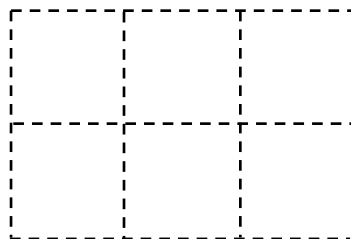
a) the **plan**



b) the **front view**



c) the **side view**



(6 marks)

5. a) **Complete** the table below

<u>Fraction</u>	<u>Percentage</u>	<u>Decimal</u>
$\frac{1}{2}$	50%	0.5
$\frac{3}{10}$		
	7%	
		0.15

- b i) This cereal pack normally contains 500g.
How many **extra grams** are there in this box?



Ans: _____ g

- ii) What is the **new mass** of the pack?

Ans: _____ g

(10 marks)

6. **Round** each of the following numbers as **given in the brackets**

i) 46892 (to the nearest thousand) Ans: _____

ii) 1742 (to the nearest hundred) Ans: _____

iii) 482 (to one significant figure) Ans: _____

iv) 62.884 (to one decimal place) Ans: _____

(4 marks)

7. a)

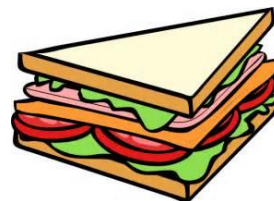
$$S = 2p + 10$$

John uses this rule to work out how many sandwiches are needed for a party.

S is the number of sandwiches

p is the number of people at the party

How many sandwiches must he make for 20 people?



Ans: _____ sandwiches

b) Given that $e = 3$, $f = 5$ and $g = 6$, work out the **value** of each of the following expressions:

i) $3(f + g)$

ii) $g^2 - f^2$

iii) $\frac{g}{e} + f$

Ans i) _____

Ans ii) _____

Ans iii) _____

(10 marks)

8. George has €340 to share between his two children, Ann and Peter. He decides to divide the money in the ratio according to their ages. Peter is 6 years old and Ann is 11 years old.

a) Write down the **ratio of their ages**.

Ans: _____ : _____

b) **How much** money will Peter and Ann receive?



Ans: Peter €_____, Ann €_____

(5 marks)

9. Express the following quantities in the **units shown**.

i) $3460 \text{ g} = \underline{\hspace{2cm}} \text{ kg}$

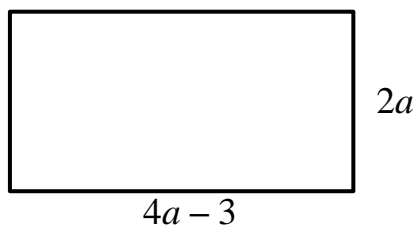
ii) $1.5 \text{ l} = \underline{\hspace{2cm}} \text{ ml}$

iii) $88200 \text{ m} = \underline{\hspace{2cm}} \text{ km}$

iv) $65 \text{ mm} = \underline{\hspace{2cm}} \text{ cm}$

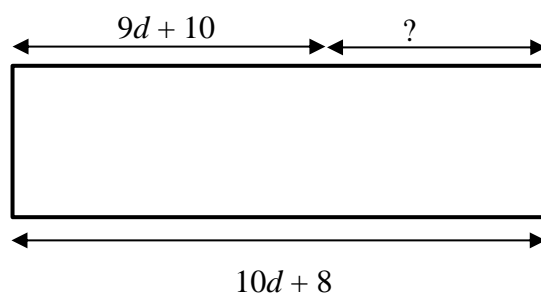
(4 marks)

10. a) Write down and **simplify** an expression for the perimeter of the shape below.



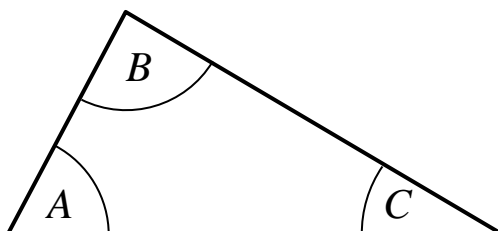
Ans:

b) Write down and **simplify** an expression for the missing length.



Ans:

c) Arrange the formula to find angle C .



$$A + B + C = 180^\circ$$

Ans: $C = \underline{\hspace{2cm}}$

(6 marks)

11. A recipe for chocolate mousse for **4 people** uses the ingredients given below:

500 g	chocolate
20 g	unsalted butter
4	eggs



a) **How much** chocolate is needed for **1 person**?

Ans: _____ g

b) Write the ingredients needed for **2 persons**.

Ans: _____ g chocolate
_____ g unsalted butter
_____ eggs

c) John makes some chocolate mousse and uses **25 g of unsalted butter**.
How many persons is he making the recipe for?

Ans: _____ people
(7 marks)

12. **Simplify** the following:

a) $4x + 3z - 5x - z$

b) $-4y - t + 4y - 2t$

Ans: _____

Ans: _____

(4 marks)

13. The diagram below shows a cuboid and part of its net.

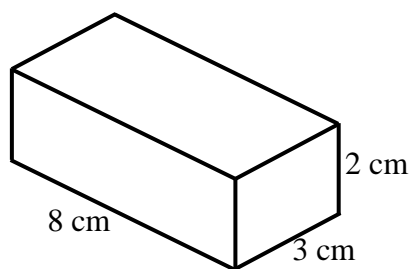
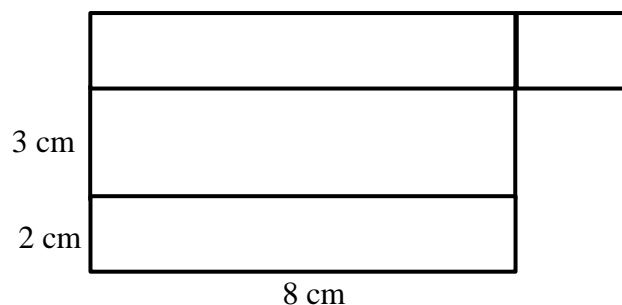


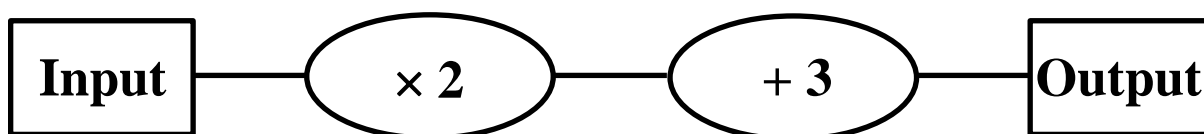
Diagram NOT to scale



Complete the net of this cuboid, by drawing the two missing faces.

(4 marks)

14.



- a) Find the output if the input is 5.

Ans: _____

- b) Find the input if the output is 23.

Ans: _____

- c) Give an **expression** for the output if the input is n .

Ans: _____

(6 marks)

END OF MAIN PAPER