

KULLEĠĠ SAN BENEDITTU

Secondary School, Kirkop

Mark

HALF YEARLY EXAMINATION – 2016/2017

Track 1

YEAR 9

MATHEMATICS

TIME: 30 mins

Non Calculator Paper

Question	1	2	3	4	5	6	7	NC
Max. Mark	4	4	4	5	2	1	4	25
Mark								

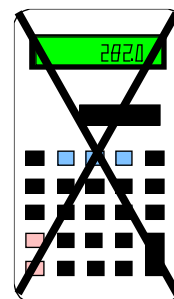
DO NOT WRITE ABOVE THIS LINE

Name: _____

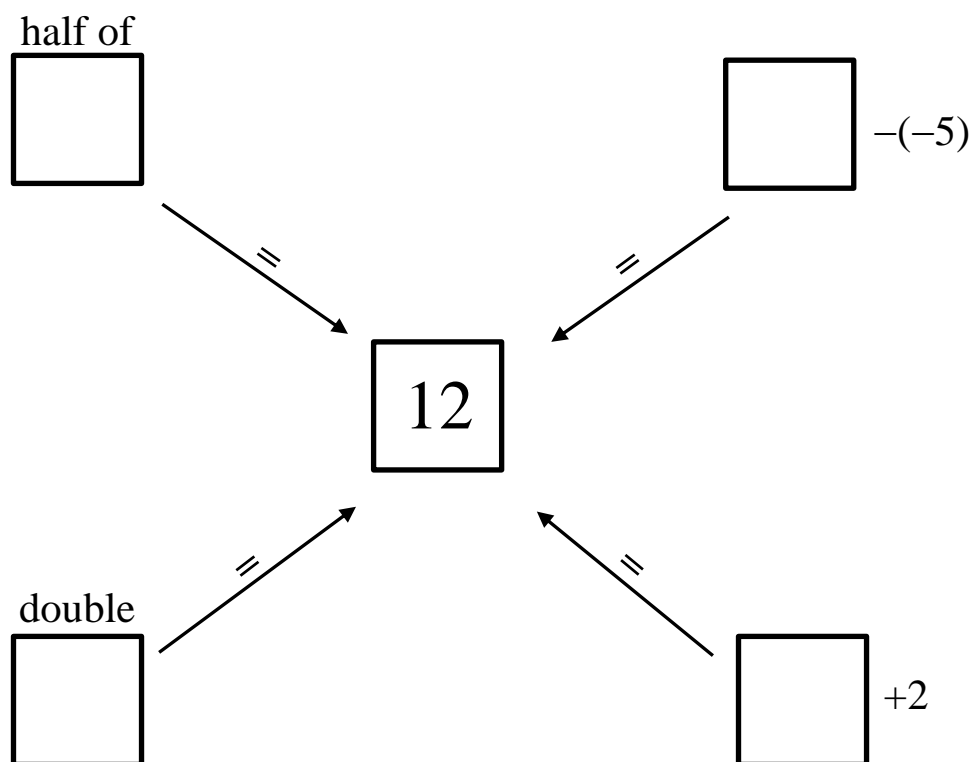
Class: _____

INSTRUCTIONS TO CANDIDATES:

- Answer ALL questions.
- This paper carries a total of 25 marks.
- Calculators and protractors are NOT ALLOWED.



1. Fill in the empty boxes so that all the **answers are 12**.



(4 marks)

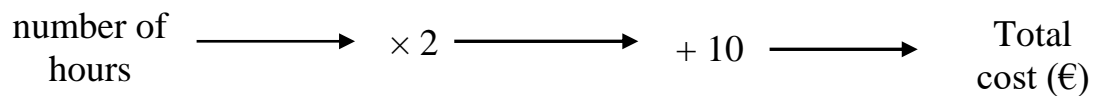
2. A man runs at a steady speed of 12 *km/h*. When he walks, his steady speed is 6 *km/h*.

Fill in the table below.

	Time	30 min	1 hour	2 hours
Distance Covered	Running	_____ km	12 km	_____ km
	Walking	_____ km	6 km	_____ km

(4 marks)

3. To rent a car Liam must first pay €10 and then an extra €2 per hour.



- (a) How much does he pay to rent the car for **5 hours**?

Ans: € _____

- (b) If he pays €26 in all, for how long does he rent the car?

Ans: _____ hours

(4 marks)

4. (a) i) Fill in and **simplify**: $60\% = \frac{\boxed{}}{100} = \frac{\boxed{}}{\boxed{}}$

- ii) Shade **60%** of this grid.

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- (b) **38%** of the pupils in a school are **girls**. What percentage are boys?

Ans: _____ %

(c) Fill in: (i) $\frac{1}{4}$ of $\boxed{} = 8$

(ii) $\boxed{}\% \text{ of } 40 = 20$

(5 marks)

5. Fill in two more numbers, so that the numbers have a **range** of 7 and a **mode** of 10.

<input type="text"/>	10	<input type="text"/>
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2 marks

6. **Underline** the best estimate for 18.7×4.1

23 800 80 150

(1 mark)

7. Fill in:

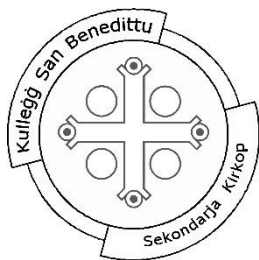
(a) $2a + 5b - 7 + 3a - 2b = \boxed{}a + \boxed{}b - 7$

(b) $4a + \boxed{}b - \boxed{}a - \boxed{}b = 2a$

(c) $3a + 6b = \boxed{}(a + 2b)$

(4 marks)

END OF NON CALCULATOR PAPER



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Mark

HALF YEARLY EXAMINATION – 2016/2017

Track 1

YEAR 9

MATHEMATICS

TIME: 1 hr 30 mins

Main Paper

Ques.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Main	NC	Global Mark
Max. Mark	5	5	6	3	3	4	6	3	3	4	4	4	7	8	10	75	25	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 75 marks.
- Calculators and mathematical instruments are allowed but all necessary working must be shown.

1. Arrange in order, starting from the **smallest**.

2

-8

-1

0

5

What is the **difference** between the smallest and biggest number?

Ans: _____

(5 marks)

2. Draw lines to match the following.

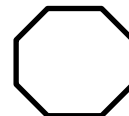
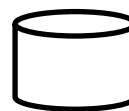
Pentagon

Rhombus

Triangle

Octagon

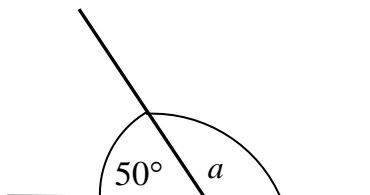
3-D solid



(5 marks)

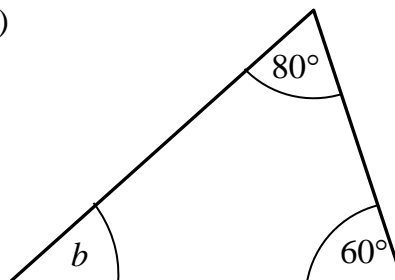
3. Find the values of the angles a , b and c in the following diagrams.

(a)



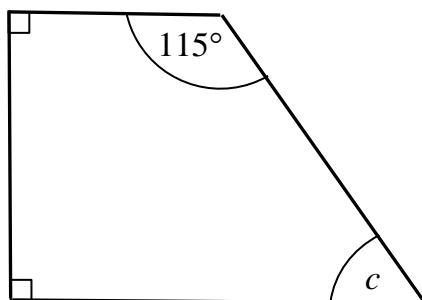
Ans: $a =$ _____

(b)



Ans: $b =$ _____

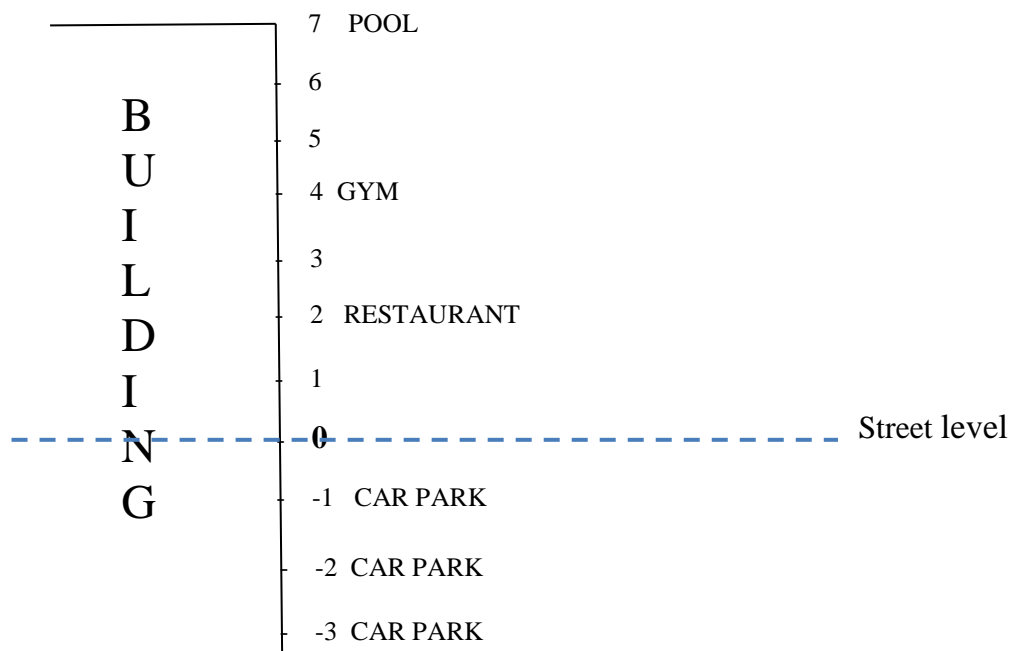
(c)



Ans: $c =$ _____

(6 marks)

4. Look at the diagram of this building.



(a) How many floors from the pool to car park -3? _____

(b) How many floors from the restaurant to the gym? _____

(c) How many floors from car park -1 to the pool? _____

(3 marks)

5. Fill in.

Number	Rounded to the nearest 10	Rounded to the nearest whole	Rounded to one decimal place
84.572			

(3 marks)

6. Work out, giving your answers in simplest form.

(a) $\frac{7}{12} + \frac{1}{12} = \text{---} = \text{---}$

(b) $\frac{9}{10} - \frac{1}{5} = \frac{9}{10} - \frac{\text{---}}{10} = \text{---}$

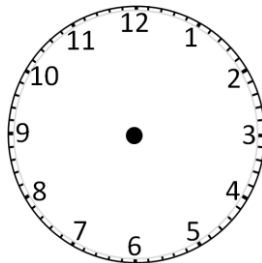
(4 marks)

7. A film starts at 20:15.

- a) Write 20:15 as an ordinary 12-hour clock.

Ans: _____ a.m./p.m. (Underline a.m. or p.m.)

- b) Show this time on the clock.



- c) The film finishes at 22:30. How long is the film?

Ans: _____ hr _____ min

(6 marks)

8. The distance between one tree and another is 1.75 m.



- a) Change 1.75 m into cm.

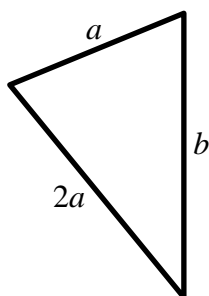
Ans: _____ cm

- b) What is the distance between the **first** and the **sixth** tree in cm?

Ans: _____ cm

(3 marks)

9.



- a) **Underline** the correct answer:

The perimeter P of this triangle is

$P = a + b$

$P = 4ab$

$P = 3a + b$

- b) Find the perimeter of the triangle when $a = 5$ cm and $b = 1$ cm.

Ans: $P =$ _____ cm

(3 marks)

10. In a bicycle store, a mountain bike is marked €800.

During a sale, the price **decreases** by 20%.

a) Find 20% of €800.



Ans: €_____

b) Work out the **sale price** of the mountain bike.

Ans: €_____

(4 marks)

11. John tried to solve the equation $2x + 3 = 7$.

He made a mistake in the working shown below:

$$2x + 3 + 3 = 7 + 3$$

$$\frac{2x}{2} = \frac{10}{2}$$

$$x = 5$$

a) Circle the mistake.

b) Solve the equation correctly.

(4 marks)

12. (a) Draw a circle of **radius 4 cm** and **centre O**.
 (b) Make an accurate construction of a regular hexagon, inside the circle.

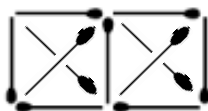
• O

(4 marks)

13. A pattern of squares is built up from matchsticks as shown:



Shape 1



Shape 2



Shape 3

a) Draw the next two shapes, **shapes 4 and 5** (include the X)

b) Fill in the table below

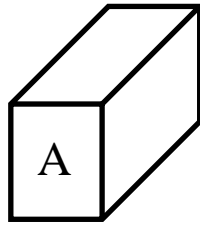
Shape no	1	2	3	4	5
No. of matchsticks used					

c) Which shape uses 41 matchsticks?

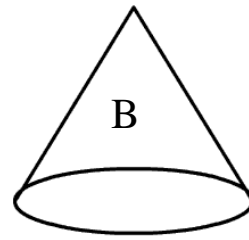
Ans: Shape number _____

(7 marks)

14. (a) i) What is the name of each of these shapes?



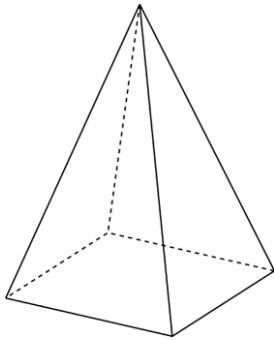
Ans: _____



Ans: _____

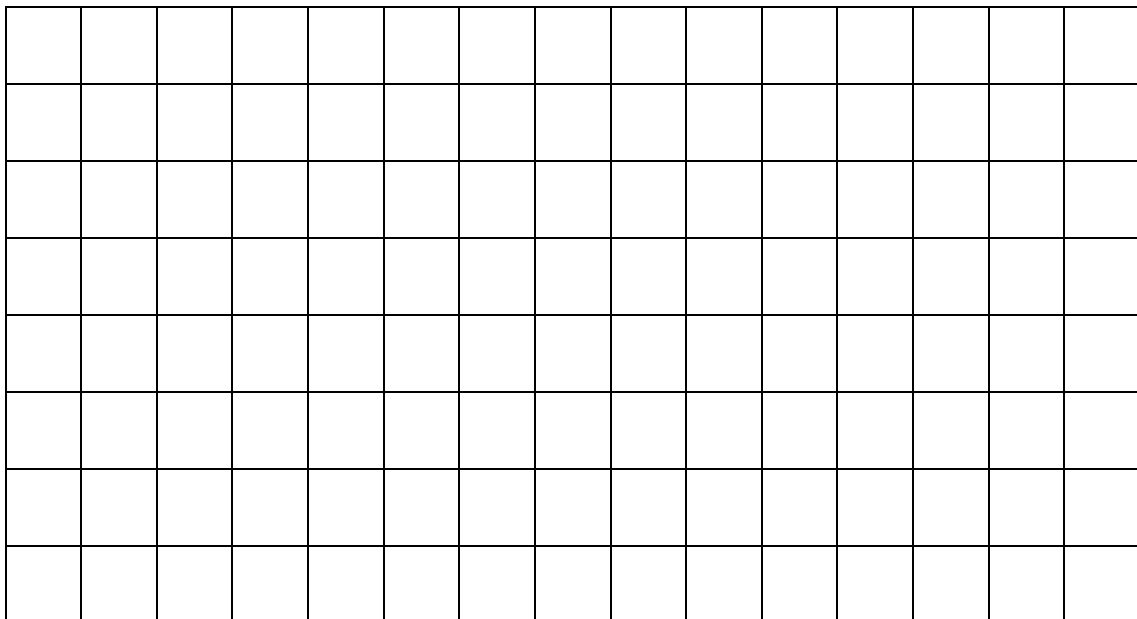
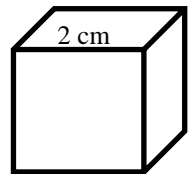
ii) Shape _____ is a prism.

(b) The shape below is a pyramid. In the table write the number of faces, vertices and edges of this pyramid.



Faces	
Vertices	
Edges	

(c) Use the **1 cm grid** below to draw the net of a cube of **sides 2 cm**.



(8 marks)

15. These are the temperatures in °C of London and Paris during a particular week in March.

London							Paris						
<i>Mon</i>	<i>Tue</i>	<i>Wed</i>	<i>Thur</i>	<i>Fri</i>	<i>Sat</i>	<i>Sun</i>	<i>Mon</i>	<i>Tue</i>	<i>Wed</i>	<i>Thur</i>	<i>Fri</i>	<i>Sat</i>	<i>Sun</i>
6	8	9	11	13	9	7	10	7	7	11	13	11	11

- (a) Fill in the table below with
- (i) the mean temperature for each city
 - (ii) the median temperature for each city

	<i>London</i>	<i>Paris</i>
Mean		
Median		

Space for working:

- (b) Which city had the warmer days? Give a reason.

(10 marks)