

# KULLEĠĠ SAN BENEDITTU

## Secondary School, Kirkop

Mark

### HALF YEARLY EXAMINATION – 2015/2016

TRACK 1

FORM 3

MATHEMATICS Track 1

TIME: 30 mins

#### Non Calculator Paper

Question	1	2	3	4	5	6	7	8	9	NC
Max. Mark	3	4	2	3	2	3	2	3	3	25
Mark										

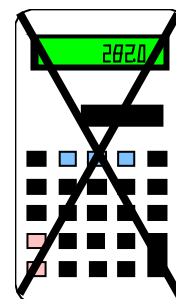
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NAME AND SURNAME: \_\_\_\_\_ CLASS: \_\_\_\_\_

#### INSTRUCTIONS TO CANDIDATES:

Read all the questions carefully before you start answering.

- Answer all questions.
- This paper carries 25 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**.

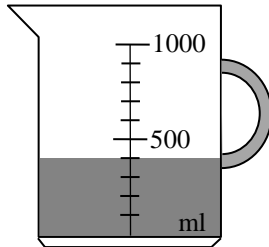


1. a) Fill in

i)  $1\frac{1}{2}$  hr = \_\_\_\_\_ minutes

ii) \_\_\_\_\_ km = 2000 metres

b)



This jug has \_\_\_\_\_ ml of water.

(3 marks)

2. a) Work out:

i)  $\frac{4}{9} - \frac{2}{9}$

ii)  $\frac{1}{2} + \frac{2}{5} =$

Ans: \_\_\_\_\_

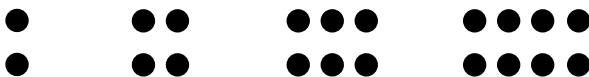
Ans: \_\_\_\_\_

b) Circle the **two** equivalent fractions:

$\frac{3}{4}$ ,  $\frac{1}{2}$ ,  $\frac{2}{7}$ ,  $\frac{4}{8}$ ,  $\frac{4}{3}$

(4 marks)

3. a) Draw the **next** pattern



Pattern 1

Pattern 2

Pattern 3

Pattern 4

\_\_\_\_\_

b) How many dots are there in **Pattern 7**?

Ans: \_\_\_\_\_ dots

(2 marks)

4. a) Work out:

i)  $4 - 5$

ii)  $4 - (-5)$

Ans: \_\_\_\_\_

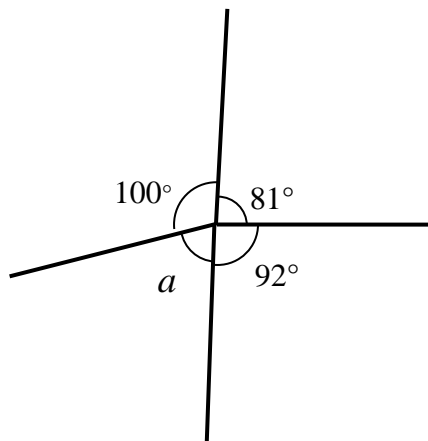
Ans: \_\_\_\_\_

b) The weather temperature in the afternoon is **23 °C**. In the evening the temperature **drops by 2 °C**. What is the temperature in the evening?

Ans: \_\_\_\_\_ °C

(3 marks)

5. Work out the size of **angle a**



Ans: **a** = \_\_\_\_\_

(2 marks)

6. a) Fill in:

$$50\% = \frac{\boxed{\phantom{00}}}{100} = \frac{\boxed{\phantom{00}}}{2}$$

b) A jacket costs **€80 before** the sale.  
Work out its price **during** the sale.



**50%  
OFF**

Ans: € \_\_\_\_\_

(3 marks)

7. Anna is solving the equation  $2a + 1 = 5$ . Anna's answer is  $a = 2$ .

Is her answer correct?      **YES**   ☐      **NO**   ☐

Show your working.

(2 marks)

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8. Tick (✓) **True** or **False**.

a) A **triangle** is a polygon with **three** sides.      **True** ☐   **False** ☐

b) A **four** sided polygon is called a **pentagon**.      **True** ☐   **False** ☐

c)  This shape is a regular **hexagon**.      **True** ☐   **False** ☐

(3 marks)

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9. A bottle of cola costs €1 and a bottle of lemonade costs €2.

James buys  $c$  bottles of cola and  $\ell$  bottles of lemonade.

The formula for the total money spent is  $\text{TOTAL} = 1c + 2\ell$

a) Work out the **TOTAL** when James buys 3 bottles of cola and 4 bottles of lemonade.

Ans: € \_\_\_\_\_

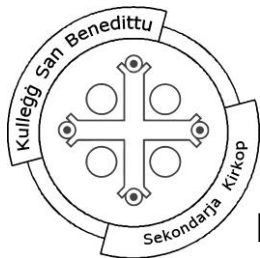
b) How many bottles of cola and bottles of lemonade can James buy for a **TOTAL** of €7?

Ans: \_\_\_\_\_ bottles of cola and \_\_\_\_\_ bottles of lemonade

(3 marks)

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**END OF PAPER**



# KULLEGĠ SAN BENEDITTU

## Secondary School, Kirkop

Mark

HALF YEARLY EXAMINATION – 2015/2016

TRACK 1

FORM 3

**MATHEMATICS** TRACK 1

TIME: 1 hr 30 mins

### Main Paper

Question	1	2	3	4	5	6	7	8	9	10	11	12	13	14	Main	NC	Global Mark
Max. Mark	4	2	6	5	4	6	6	8	8	8	3	6	4	5	75	25	100
Mark																	

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

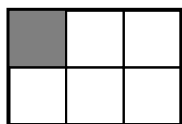
### INSTRUCTIONS TO CANDIDATES:

Read all the questions carefully before you start answering.

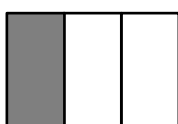
- Answer all questions.
- This paper carries 75 marks.
- Calculators and mathematical instruments are allowed but all necessary working must be shown.

1. Work out the following and give your answers in the simplest form.

a)



+



Ans: \_\_\_\_\_

b)

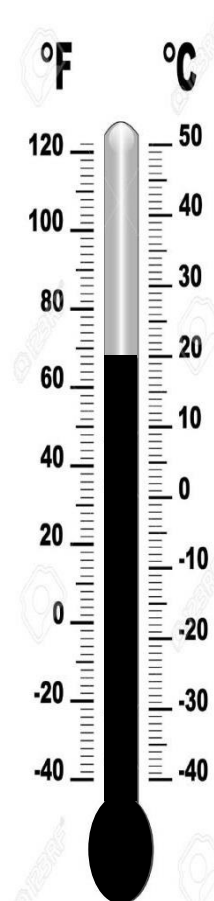
$$\frac{3}{5} - \frac{3}{10}$$

Ans: \_\_\_\_\_

(4 marks)

2. a) The temperature in  $^{\circ}\text{C}$  is \_\_\_\_\_.

b) The temperature in  $^{\circ}\text{F}$  is \_\_\_\_\_.

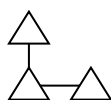


(2 marks)

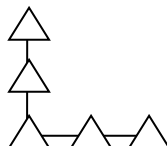
3.



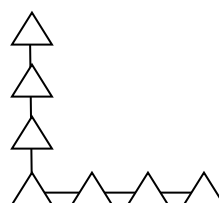
**Shape 1**



**Shape 2**



**Shape 3**



**Shape 4**

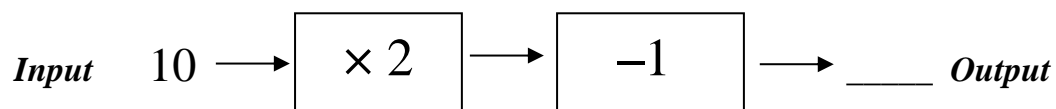


**Shape 5**

a) Complete **Shape 5** in the space provided.

b) Shape 7 has \_\_\_\_\_ triangles.

c) **Complete** this function machine which gives the number of triangles in **Shape 10**.



(6 marks)

4. The table shows the time Mario takes to walk between three places in Malta.

	Naxxar	Mdina	Gudja
Naxxar		2 hours	4 hours
Mdina	2 hours		3 hours
Gudja	4 hours	3 hours	

a) The **time** taken to walk between:

i) Naxxar and Mdina is \_\_\_\_\_ hours.

ii) Gudja and \_\_\_\_\_ is 3 hours.



b) Mario walks at 6 km per hour.

What is the **distance** he travels between Mdina to Naxxar **and back**?

Ans: \_\_\_\_\_ km

(5 marks)

5. Draw lines to match the following:

TIME

LITRES

VOLUME

METRES

WEIGHT

GRAMS

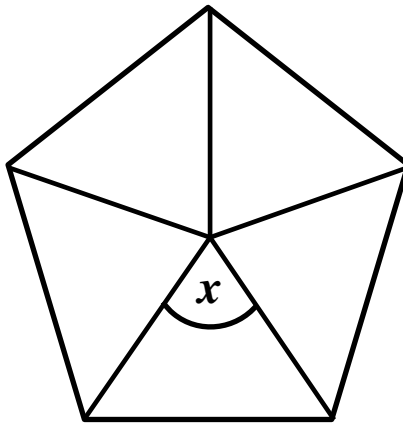
DISTANCE

MINUTES

(4 marks)

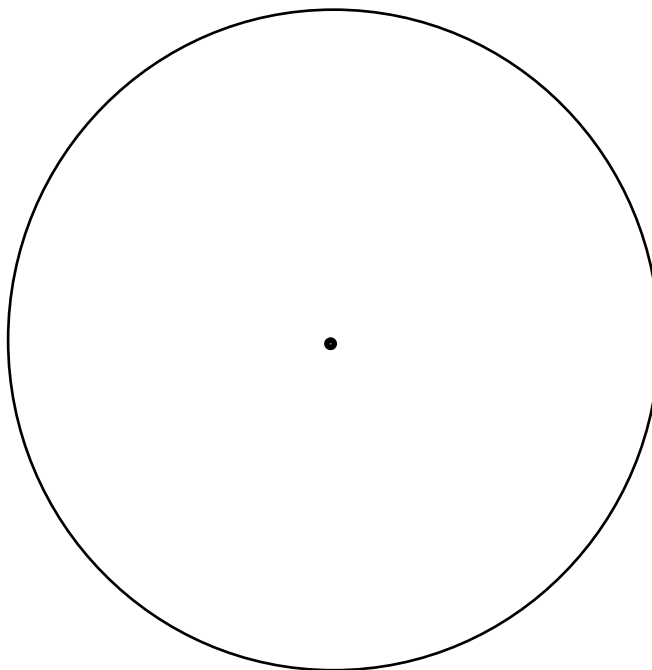
6. The diagram shows a regular pentagon.

a) Work out the size of angle  $x$ .



Ans: \_\_\_\_\_<sup>o</sup>

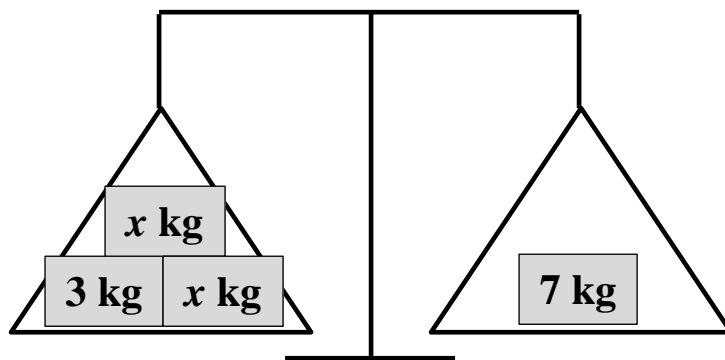
b) Use your protractor to draw a regular octagon (**8 sides**) inside the circle.



(6 marks)



7. a) Calculate the value of  $x$ .



$x =$  \_\_\_\_\_

- b) Solve these equations.

i)  $a - 9 = 5$

ii)  $4b = 24$

iii)  $2c - 3 = 15$

$a =$  \_\_\_\_\_

$b =$  \_\_\_\_\_

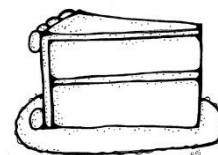
$c =$  \_\_\_\_\_

(6 marks)

8. a) **40%** of Crispy Cake is sugar.

i) In 100 g of Crispy Cake, there is \_\_\_\_\_ g sugar.

ii) How much sugar is there in 250 g of Crispy Cake?



Ans: \_\_\_\_\_ g

- b) Charlene weighs 90 kg. She **loses** 10% of her weight.

i) Work out 10% of 90 kg.

Ans: \_\_\_\_\_ kg

ii) What is Charlene's weight after the weight loss?

Ans: \_\_\_\_\_ kg

(8 marks)

9. These are the marks obtained by eleven students in a test.

**11    12    17    23    41    48    60    60    60    65    76**

a) The **median** mark is \_\_\_\_\_.

b) Work out the **mean** mark.

Ans: \_\_\_\_\_

c) The **mode** is \_\_\_\_\_.

d) Work out the **range**.

Ans: \_\_\_\_\_

e) Jeremy obtained a mark of 60 in the test.  
Give a reason to explain that this is a good mark.

\_\_\_\_\_

(8 marks)

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10. a) Simplify the expression:  **$9a + 3b - 2a + 5b$**

Ans: \_\_\_\_\_

b) Factorise the expression:  **$9x + 3y$**

Ans: \_\_\_\_\_

c) Work out the value of  **$3x + 5y - 3z$**  given that  **$x = 2$** ,  **$y = 3$**  and  **$z = 4$** .

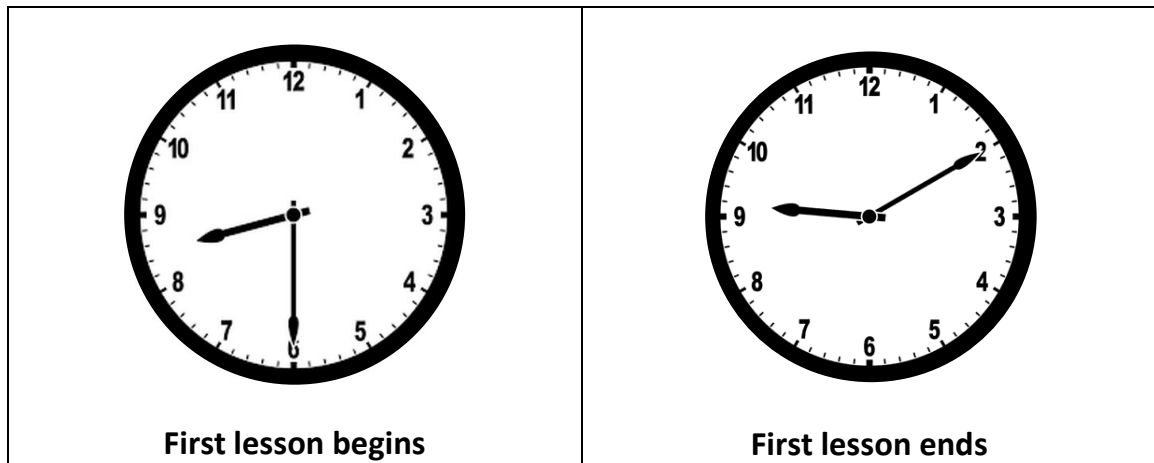
Ans: \_\_\_\_\_

d) Expand  **$3(2x - 4y)$**

Ans: \_\_\_\_\_

(8 marks)

11.



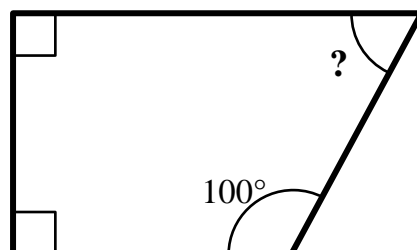
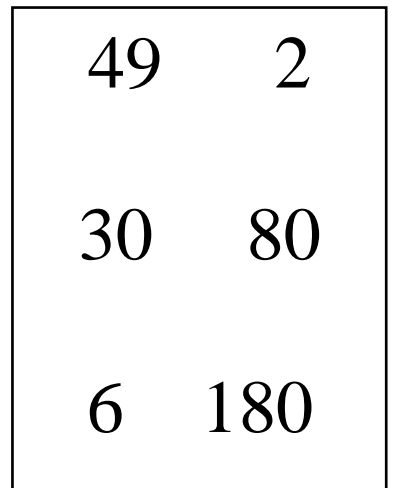
Fill in.

- a) The first lesson begins at \_\_\_\_\_ past \_\_\_\_\_ .
- b) The first lesson is \_\_\_\_\_ minutes long.

(3 marks)

12. Choose the correct numbers from the box to complete the following:





- a) 25 correct to the nearest 10 is \_\_\_\_\_.
- b) A square number between 45 and 55 is \_\_\_\_\_.
- c) The length of a door is about \_\_\_\_\_ m.
- d) The angles of a triangle add up to \_\_\_\_\_.
- e) A hexagon is a shape with \_\_\_\_\_ sides.
- f) The missing angle in the diagram below is \_\_\_\_\_ .



(6 marks)

13. Use the numbers below to fill in the blanks.

2355 m       $-8^{\circ}\text{C}$        $200^{\circ}\text{C}$        $-5\text{ m}$

 <p>Temperature</p> <p>_____</p>	 <p>Height</p> <p>_____</p>	 <p>Height</p> <p>_____</p>	 <p>Temperature</p> <p>_____</p>
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(4 marks)

14. a) Kaya has €50 in her bank account. After her birthday party, she adds €20.  
She draws €100 to buy a mobile phone.  
What is the new balance?

Ans: \_\_\_\_\_

- b) Kevin is in a lift at Level  $-4$ . He has to reach Level  $8$ .  
How many floors does the lift have to travel upwards?

Ans: \_\_\_\_\_ floors

(5 marks)

**END OF EXAM**