

# KULLEĠĠ SAN BENEDITTU

## Secondary School, Kirkop

Mark

HALF YEARLY EXAMINATION – 2016/2017

Levels 6-7

YEAR 8

MATHEMATICS

TIME: 30 mins

### Non Calculator Paper

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

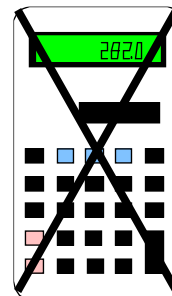
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Name: \_\_\_\_\_

Class: \_\_\_\_\_

### INSTRUCTIONS TO CANDIDATES:

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



1. a) Work out. Give your answer correct to 2 decimal places.

$$1.949 \div 3$$

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

- b) What is 0.19 less than 6?

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

(4 marks)

- 
2. Fill in the spaces in the sequences

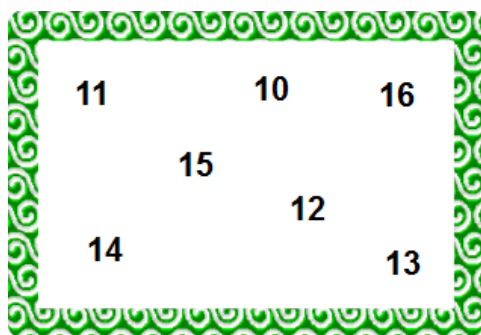
a) 2, 6, 18, 54, \_\_\_\_\_ .

b) 14, 20, 26, \_\_\_\_\_ , 38.

c)  $2, 1\frac{3}{4}, 1\frac{1}{2}, \text{_____, } 1.$

(3 marks)

- 
- 3.



From the numbers above:

- a) Circle a factor of 20.  
b) Underline a multiple of 6.  
c) Find the difference between the two answers of (a) and (b).

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

(3 marks)

4. Express 90 as a product of its prime factors.

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

(2 marks)

- 
5. a) Simplify the following expressions:

i)  $5z - 7 + 9z + 8$

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

ii)  $13d - 5e + 8f - 9d + 5e - 13f$

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

- b) Expand and simplify:

$$15(2a - 4) + 10a$$

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

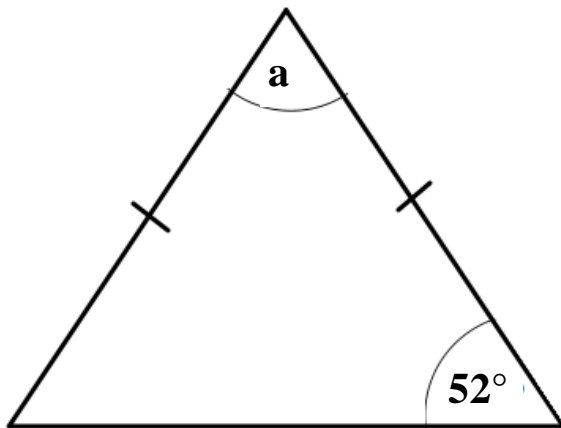
(4 marks)

- 
6. What is  $\frac{5}{6}$  of the number of days in June?

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

(3 marks)

7. Calculate the size of the unknown angle.



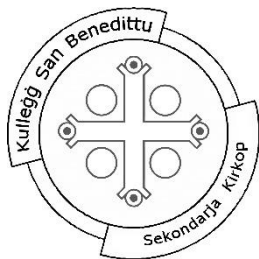
Ans: \_\_\_\_\_  
(2 marks)

8. Complete the following table by filling in the missing values as shown in the example.

Percentages	Fractions	Decimals
12.5%	$\frac{1}{8}$	0.125
17%		
		0.03

(4 marks)

**END OF NON CALCULATOR PAPER**



# KULLEGG SAN BENEDITTU

## Secondary School, Kirkop

Mark

### HALF YEARLY EXAMINATION – 2016/2017

Levels 6-7

YEAR 8

MATHEMATICS

TIME: 1 hr 30 mins

#### Main Paper

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

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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. Write these numbers in order of size, **smallest first**:

3.125

3.16

3.6

0.31

31

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

(3 marks)

2. a) Change  $\frac{15}{4}$  to a mixed number.

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

- b) Express  $\frac{7}{25}$  as a decimal.

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

(2 marks)

3. Jake has **football** training every 4 days and **basketball** training every 5 days.  
Today he has both football and basketball training sessions.  
After how many days will he have both training sessions on the same day?



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

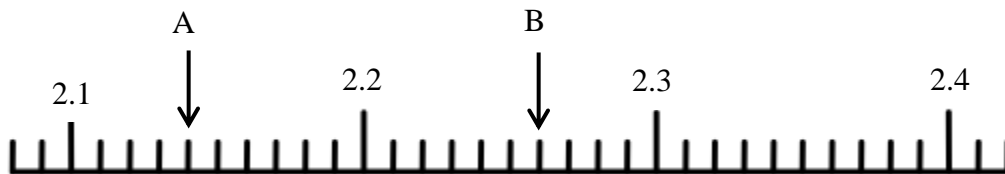
(2 marks)

4. A winter coat costs €200. In January there is a sale of 15%.  
Work out the cost of the coat during the sale.

Ans \_\_\_\_\_

(3 marks)

5. Write the numbers to which the arrows are pointing:



A = \_\_\_\_\_ .      B = \_\_\_\_\_ .

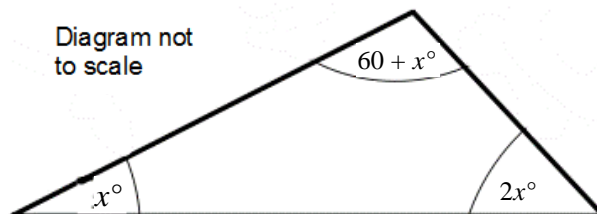
(2 marks)

6. Solve the following equations.

a) i)  $z + 12 = 35$

ii)  $4(x - 7) = 60$

- b) i) In a triangle, the size of its interior angles are  $x^\circ$ ,  $2x^\circ$  and  $60 + x^\circ$ . Write down an expression for the sum of the interior angles of this triangle.



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

- ii) Form an equation for the sum of the interior angles in the triangle and **solve** it to find the value of  $x$ .

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

(10 marks)

7. Work out and simplify, where possible. Show all your working.

a) 
$$\frac{5}{6} \times \frac{9}{25} =$$

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

b) 
$$\frac{2}{9} + \frac{2}{3} - \frac{1}{18}$$

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

(6 marks)

8. The pie chart shows the type of transport 180 people use to travel to work.

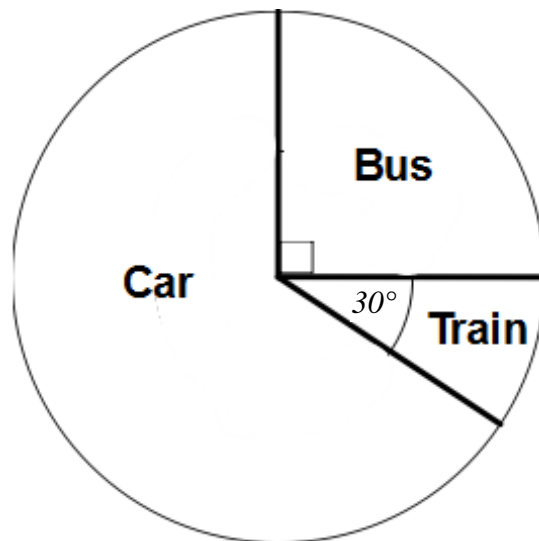
a) What fraction of the whole group travel by bus?

Simplify your answer if possible.

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

b) How many people travel by train?

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



(5 marks)

9. a)



The temperature in London was  $4^{\circ}\text{C}$ . A week after, it went down by  $12^{\circ}\text{C}$ . What was the new temperature reading?

Ans: \_\_\_\_\_  $^{\circ}\text{C}$

b) Circle the larger number

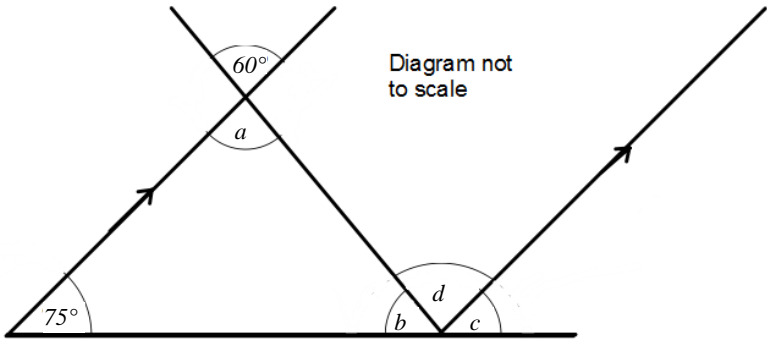
-14

-10

(3 marks)



10. Calculate the size of the unknown angles in this diagram. Give reasons for your answers.



Angle  $a$  = \_\_\_\_\_ Reason \_\_\_\_\_

Angle  $b$  = \_\_\_\_\_ Reason \_\_\_\_\_

Angle  $c$  = \_\_\_\_\_ Reason \_\_\_\_\_

Angle  $d$  = \_\_\_\_\_ Reason \_\_\_\_\_

(8 marks)

11. **Match** the following patterns to their rule.

Pattern
4, 3, 2, 1, 0, ....
4, 8, 16, 32, 64, ....
4, 8, 12, 16, 20, ....
4, 7, 10, 13, 16, ....

Rule
Multiplying by 2
Subtracting 1
Adding 3
Adding 4

(4 marks)

12. The following are the sizes of ladies shoes:

36, 37, 35, 34, 38, 39, 40, 38, 36, 36.

Find the



a) Mean size

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

b) Mode

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

c) Median

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

d) Range

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

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(9 marks)

13. The following data shows the number of tonnes of waste collected from bring-in sites in Malta in five years.



YEAR	2010	2011	2012	2013	2014
Paper and Cardboard	1418	1386	856	913	1005
Plastic	773	682	525	709	590
Cans	272	277	181	236	195
Glass	1777	2610	1885	2185	1951
<b>TOTAL</b>	<b>4240</b>	<b>4955</b>	<b>3447</b>	<b>4043</b>	<b>3741</b>

Source: Wasteserv Malta Ltd, MEPA

- a) In 2014 more than 50% of waste collected from bring-in sites was paper and cardboard.

Underline the correct answer. TRUE or FALSE.

- b) Mark ☒ in the correct box:

18.23% of waste collected in **2010** was

Paper and cardboard	Plastic	Cans	Glass
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- c) What percentage of **total waste** collected in **2012** was plastic? Correct your answer to **1 decimal place**.

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

- d) Calculate the **percentage increase** in total waste collected between **2010** and **2011**. Give your answer to the **nearest whole percent**.

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

(8 marks)

14. The time taken, **in minutes**, by some athletes to complete a race is recorded.



36	51	44	44	43	41	51	42	36
46	50	31	53	36	40	37	53	44
45	52	33	48	33	50	39		

a) Complete this frequency table.

Time (t) minutes	Tally	Frequency
$30 \leq t < 35$		
$35 \leq t < 40$		
$40 \leq t < 45$		
$45 \leq t < 50$		
$50 \leq t < 55$		

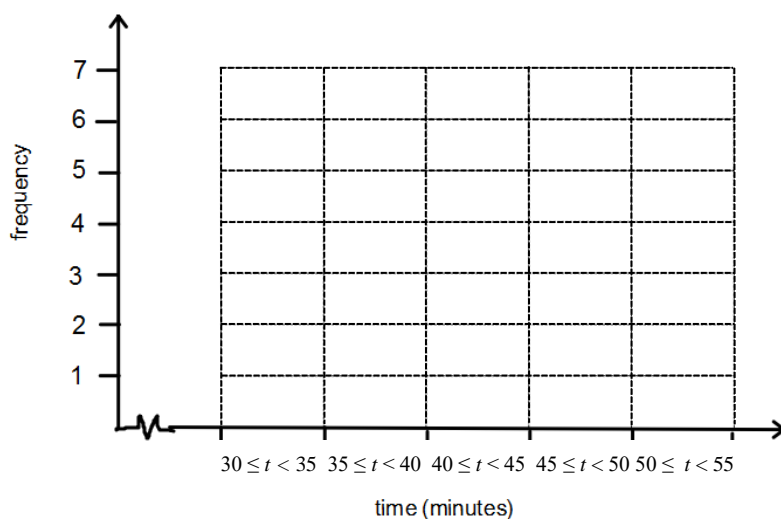
b) How many athletes were there?

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

c) How many athletes ran the race in less than 45 minutes?

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

d) Draw a bar chart for the above information



(10 marks)

END OF PAPER