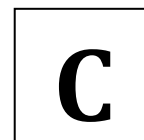


KULLEGĠ SAN BENEDITTU
Boys Secondary School, Kirkop



HALF-YEARLY EXAMINATIONS – FEBRUARY 2012

FORM 4

MATHEMATICS Scheme C

TIME: 20 mins

Non Calculator Paper

Question	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total
Mark																					

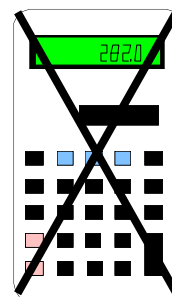
DO NOT WRITE ABOVE THIS LINE

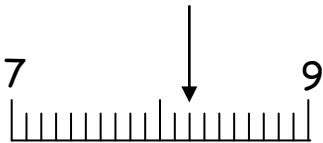
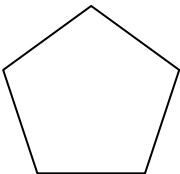
NAME AND SURNAME: _____ **CLASS:** _____

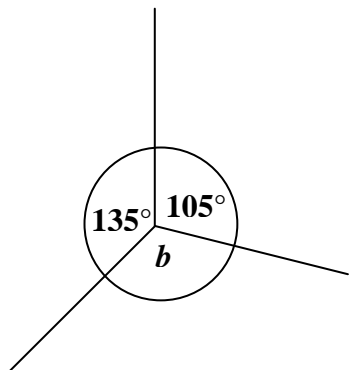
INSTRUCTIONS TO CANDIDATES:

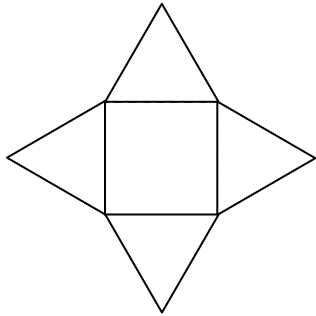
Read all the questions carefully before you start answering.

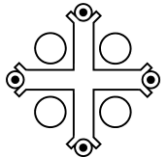
- Answer all questions.
- This paper carries 20 marks.
- **Calculators, protractors** and other mathematical instruments are **NOT ALLOWED**.
- On your desk you should have nothing except for **pen, pencil, ruler** and the **examination paper**.
- You are not required to show your working. However, space for working is provided if you need it.



No	QUESTION	SPACE FOR WORKING (IF REQUIRED)
1	Work out: $(56 - 7) \times 10$ <div style="text-align: right;">Ans _____</div>	
2	Write 45.5493 correct to 2 decimal places (d.p.) <div style="text-align: right;">Ans _____</div>	
3	A rough estimate of 293×49 is: a) 12000 b) 1500 c) 8000 d) 15000 <div style="text-align: right;">Ans _____</div>	
4	Write down the number the arrow is pointing to . <div style="text-align: center;">  </div> <div style="text-align: right;">Ans _____</div>	
5	Write 0.35km in metres . <div style="text-align: right;">Ans _____</div>	
6	Work out $560 \div 100$ <div style="text-align: right;">Ans _____</div>	
7	This is a regular pentagon. How many lines of symmetry does it have? <div style="text-align: center;">  </div> <div style="text-align: right;">Ans _____</div>	

8	Write down a square number between 60 and 70. Ans _____						
9	Change 75% as a fraction in its lowest terms . Ans _____						
10	Work out the value of $17 - (-8)$ Ans _____						
11	Calculate the size of angle <i>b</i>  Ans _____						
12	A teacher measures the height of five students. Find the range if the results are: <table border="1" data-bbox="285 1393 1091 1453"><tr><td>150cm</td><td>160cm</td><td>145cm</td><td>150cm</td><td>155cm</td></tr></table> Ans _____	150cm	160cm	145cm	150cm	155cm	
150cm	160cm	145cm	150cm	155cm			
13	Which of the following numbers is a cube ? a) 25 b) 27 c) 50 d) 100 Ans _____						

14	<p>This is the net of a:</p> <p>a) triangular prism b) square based pyramid c) rectangular based pyramid d) cuboid</p> 	
15	<p>The temperature at 7pm in a winter night in London was 3°C. By midnight it dropped by 5°C. What was the temperature at midnight?</p> <p style="text-align: right;">Ans _____</p>	
16	<p>Find the value of $5a - 9$ when $a = 4$</p> <p style="text-align: right;">Ans _____</p>	
17	<p>Write a number that is</p> <ul style="list-style-type: none"> • a prime number • an odd number • a factor of 28 <p style="text-align: right;">Ans _____</p>	
18	<p>How many 20c coins make €2?</p> <p style="text-align: right;">Ans _____</p>	
19	<p>The weight of a man is about:</p> <p>a) 0.72 kg b) 75000 g c) 7.5 kg d) 7200 g</p> <p style="text-align: right;">Ans _____</p>	
20	<p>Find the value of 50% of €250</p> <p style="text-align: right;">Ans _____</p>	



KULLEĠĠ SAN BENEDITTU
Boys Secondary School, Kirkop

C

HALF-YEARLY EXAMINATIONS – FEBRUARY 2012

FORM 4

MATHEMATICS Scheme C

TIME: 1hr 40mins

Main Paper

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

DO NOT WRITE ABOVE THIS LINE

NAME AND SURNAME: _____ **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) What is the value of the underlined digit in each of the following?

(i) 8943 _____ (ii) 12 567 _____

b) (i) Write 1832 correct to the nearest 100. _____

(ii) Write 1832 correct to the nearest 1000. _____

(4 marks)

2. a) Write these numbers in order, **largest first**.

0.23 2.03 3.003 0.3 3.02 0.32

b) Tick ☒ next to the numbers that lie between **1.5** and **2.05**

1.45 ☐ **1.05** ☐ **1.78** ☐ **2.5** ☐ **2.01** ☐ **2.10** ☐

(5 marks)

3. a) Write each number correct to **1 significant figure**:

i) 21.3 _____ ii) 78.2 _____ iii) 12.01 _____

b) Now give a **rough estimate** of: $\frac{21.3 \times 78.2}{12.01}$

c) Use your calculator to work out the value of $\frac{21.3 \times 78.2}{12.01}$
Give your answer correct to **1 d.p.**

(7 marks)

4. a) Change the following **quantities** :

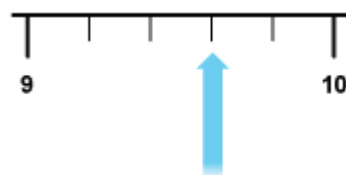
i) 3.6 kg = _____ g

ii) 7000 cm = _____ m

b) What is the reading on the following scales?



i) _____



ii) _____

(4 marks)

5. a) Give the value of:

i) 3.8×10^3 _____

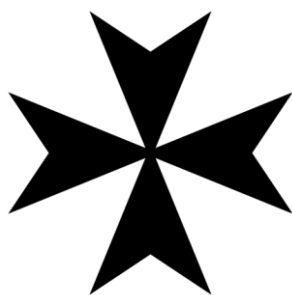
ii) $52.6 \div 10^2$ _____

b) Work out the value of y when $y \times 10^2 = 240$

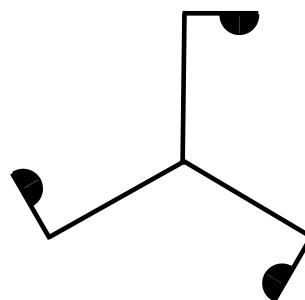
$y =$ _____

(4 marks)

6. a) Write down the order of **rotational symmetry** for the figures below:

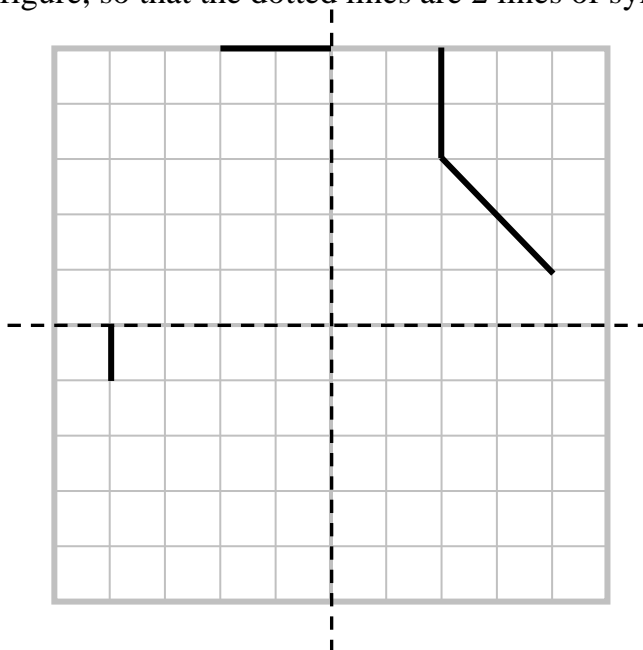


i) Order = _____



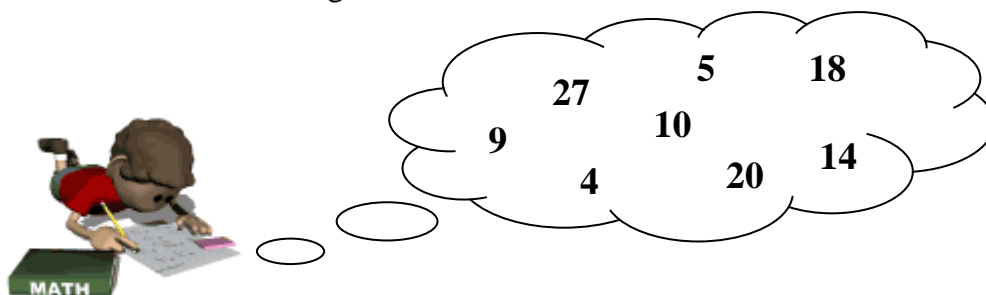
ii) Order = _____

b) Complete the figure, so that the dotted lines are 2 lines of symmetry.



(6 marks)

7. Use the numbers in the diagram to choose:



A **prime** number

A **multiple** of 7

A **square** number

The **square root** of 100

A **common multiple** of 3 and 6

A **common factor** of 12 and 24

(6 marks)

8. During a biology fieldwork, a student measured the length, in centimetres, of 10 earthworms. Here are the results.

10.2	12.3	15.0	18.7	12.3
13.4	12.3	12.9	12.3	15.0

a) What is the **range** of these measurements?

_____cm

b) Work out the **mean** length of these earthworms.
Give your answer to **1 d. p.**



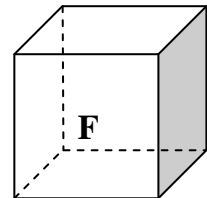
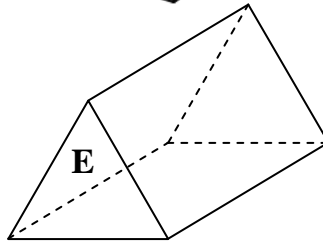
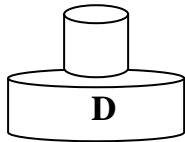
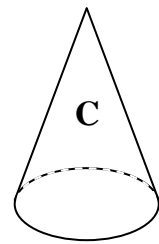
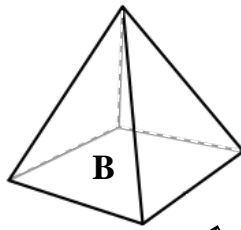
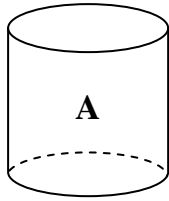
_____cm

c) What is the **mode** of these lengths?

_____cm

(6 marks)

9. Here are some solid shapes:



Fill in:

a) Shapes _____, _____, and _____ are **prisms**.

b) Shapes _____ and _____ are **pyramids**.

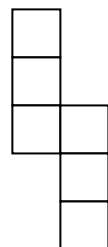
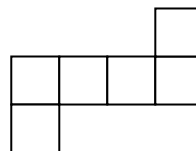
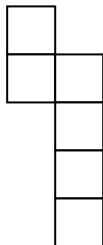
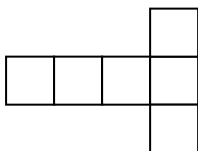
c) **Shape B** is called a _____ based _____.

It has ____ faces and ____ vertices.

d) **Shape E** is called a _____.

It has ____ faces and ____ vertices.

e) Which of the following is **NOT** the net of **shape F**?



(8 marks)

10. The following data shows the ages of the people who visited a fitness centre on a particular Saturday:

26 30 55 32 28 26 60 19 17 28
 25 31 43 42 18 45 30 23 56 50
 35 22 20 18 57 36 19 40 62 65

a) Use the information to complete the frequency table:

Age (in years)	Tally	Frequency
0 – 19		
20 – 39		
40 – 59		
60 – 79		



b) How many persons were **younger than 40 years**?

_____ persons

c) How many persons were **older than 40 years**?

_____ persons

d) What was the **total number of persons** who visited the fitness centre?

_____ persons

e) **Most** people were from _____ to _____ years old.

(8 marks)

11. a) Change 0.2 to a percentage.

b) Change $\frac{2}{5}$ to a percentage.

c) On a particular day, 65% of the candidates **passed** their driving license test.

i) What percentage of the candidates **failed** this test?



There were 20 candidates who sat for the test.

ii) How many candidates **passed** the test?

iii) How many candidates **failed** their test?

(8 marks)

12. Kevin uses this rule to change temperature from $^{\circ}\text{C}$ into $^{\circ}\text{F}$.

Multiply the temperature in $^{\circ}\text{C}$ by 2
and add 30 to the answer



a) Use this rule to change:

(i) 22°C into $^{\circ}\text{F}$

(ii) -5°C into $^{\circ}\text{F}$

_____ $^{\circ}\text{F}$

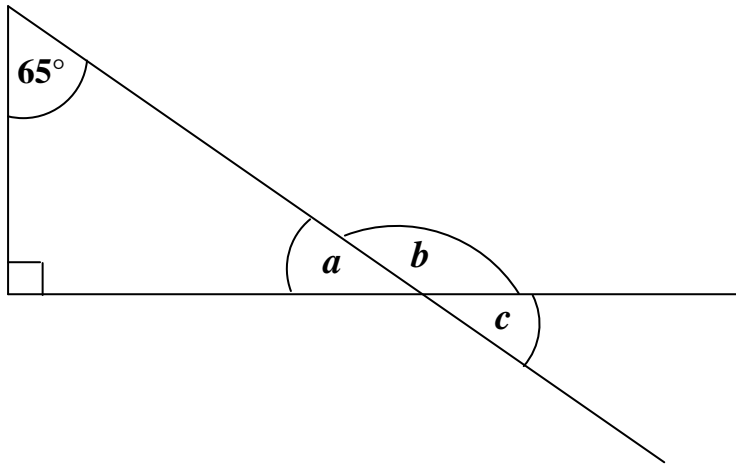
_____ $^{\circ}\text{F}$

b) If **F** represents the temperature in $^{\circ}\text{F}$ and **C** represents the temperature in $^{\circ}\text{C}$, complete the formula for the above rule.

F = ____ **C** + ____

(6 marks)

13. a) Work out the size of angles a , b and c .

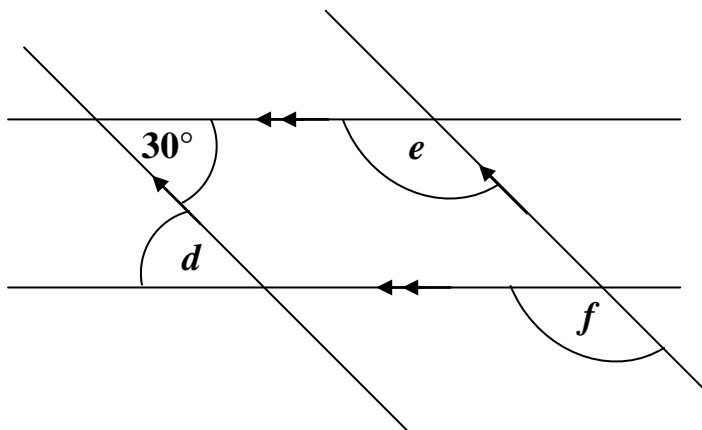


$$a = \underline{\hspace{2cm}}^\circ$$

$$b = \underline{\hspace{2cm}}^\circ$$

$$c = \underline{\hspace{2cm}}^\circ$$

b) Work out the size of angles d , e and f .



$$d = \underline{\hspace{2cm}}^\circ$$

$$e = \underline{\hspace{2cm}}^\circ$$

$$f = \underline{\hspace{2cm}}^\circ$$

c) Underline the correct answer:

i) Angles a and c are (corresponding, alternate, vertically opposite) angles.

ii) Angles e and f are (corresponding, alternate, vertically opposite) angles.

(8 marks)