

SECONDARY SCHOOLS ANNUAL EXAMINATIONS - 2003

Educational Assessment Unit - Education Division

FORM 2

MATHEMATICS (NON-CALCULATOR)

TIME: 10 minutes

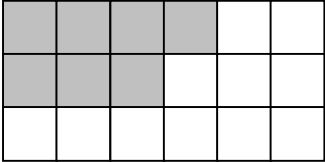
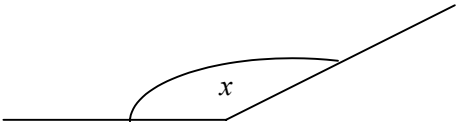
Name _____

Class _____

Mark

- ANSWER ALL QUESTIONS.
- EACH QUESTION CARRIES 1 MARK.
- CALCULATORS, RULERS, PROTRACTORS AND OTHER MATHEMATICAL INSTRUMENTS ARE NOT ALLOWED.
- WRITE DOWN YOUR ANSWER ONLY IN THE SPACE PROVIDED.

**DO NOT
WRITE
IN
THIS
SPACE**

QUESTIONS	Space for working if required
1. Lm8 – Lm6.49 _____	
2. The diameter of an orange is about: a) 7 mm b) 7 km c) 7 cm d) 7m _____	
3. Write down the next number in the pattern: 1 3 6 10 15 _____	
4. What fraction of the shape is shaded? 	
5. Place the correct symbol > < or = 0.7 $\frac{3}{4}$ _____	
6. Find x if $x - 7 = 9$ _____	
7.  The size of angle x is about: a) 40° b) 100° c) 150° d) 170° . _____	
8. $\frac{2}{9} + \frac{1}{3}$ _____	
9. Find the area. 	
10. What is the value of 5 in 87.54? _____	

SECONDARY SCHOOL ANNUAL EXAMINATIONS 2003

Educational Assessment Unit - Education Division

FORM 2

MATHEMATICS (Main Paper)

TIME: 1 h 50 min

Question	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total Main	Mental	Global Mark
Mark																		

DO NOT WRITE ABOVE THIS LINE

Name _____

Class _____

CALCULATORS ARE ALLOWED

ANSWER ALL QUESTIONS.

1. (a) (i) Write 789 correct to the nearest 100. _____

(ii) Write 4198 correct to the nearest 1000. _____

(b) (i) Work out: $27.6 \div 10$ _____

(ii) Give the smallest common multiple of 6 and 9. _____

(4 marks)

2. (a) Find the value of 4^3 . _____

(b) Find the value of $\sqrt{81}$. _____

(c) Use a calculator to find the value of $\sqrt{7.84}$. _____

(4 marks)

3. (a) Express 80% as a fraction in its lowest terms. _____

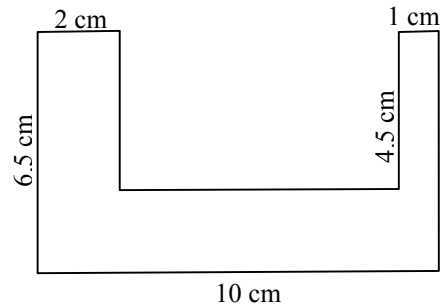
(b) Find 15% of 4.6 metres. (Give the answer in **centimetres**.) _____

(4 marks)

4. Tom works from 7.40 a.m. to 12.10 pm. everyday, fom Monday to Saturday.
- (a) How many hours and minutes does he work everyday?
- (b) How many hours does he work in a week?

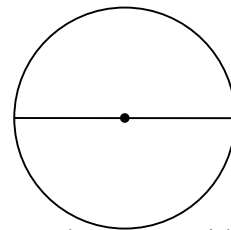
(4 marks)

5. Find the perimeter of this shape.



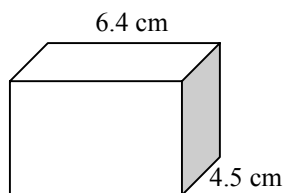
(4 marks)

6. (a) The figure shows a round pool. The diameter of the pond is 6 metres. Find the circumference of the pond. (**Give the answer correct to two decimal places.**)



Circumference of a circle = $2 \pi r$.

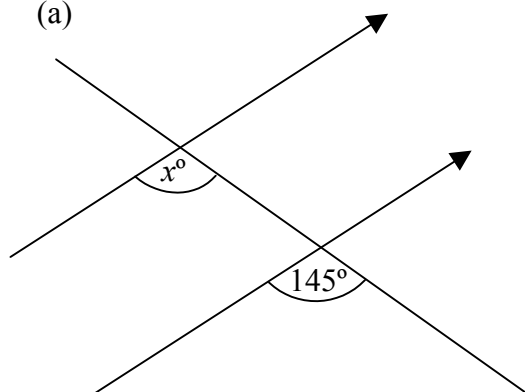
- (b) The volume of a cuboid is 172.8 cm^3 . The cuboid is 6.4 cm long and 4.5 cm wide. What is the height of the cuboid?



(6 marks)

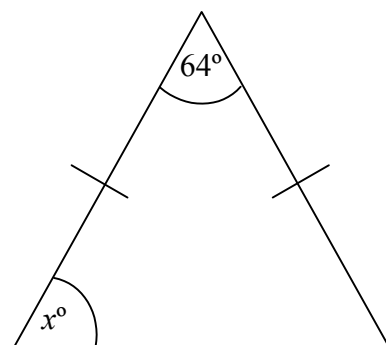
7. For each diagram find the size of x° .

(a)



o

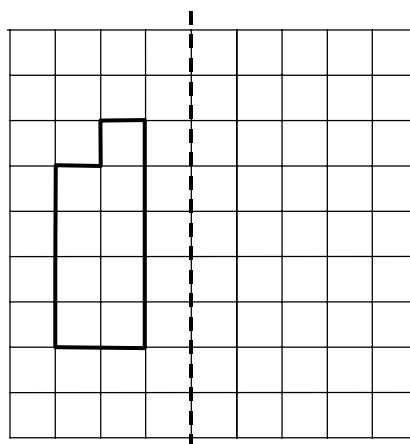
(b)



o

(6 marks)

8. Complete the given drawing so that the dotted line is the line of symmetry.



(6 marks)

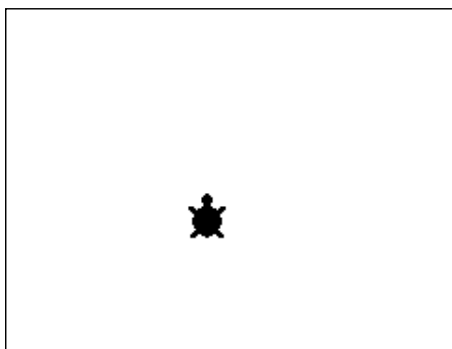
9. (a) Tom types these commands using **LOGO**.

PD

FD 100

REPEAT 4 [FD 20 RT 90]

Draw what he sees.



- (b) Anna is using a spreadsheet.

	A	B	C
1	4	3	5
2	2	6	
3	6	9	9

She types the numbers as shown. She then types the formula **=A2+B2/3** in cell **C2**. What does she get when she types **ENTER**?

(6 marks)

10. (a) Mary buys three videos and four compact discs. Each video costs Lm X and each compact disc costs Lm $2X$.

Write an expression to show how much she spent altogether.

- (b) Solve the equation: (i) $a - 5 = -6$

(ii) $2b + 3 = 8 - 3b$

(6 marks)

11. (a) Plot the following points.

$$A = (-3, 4)$$

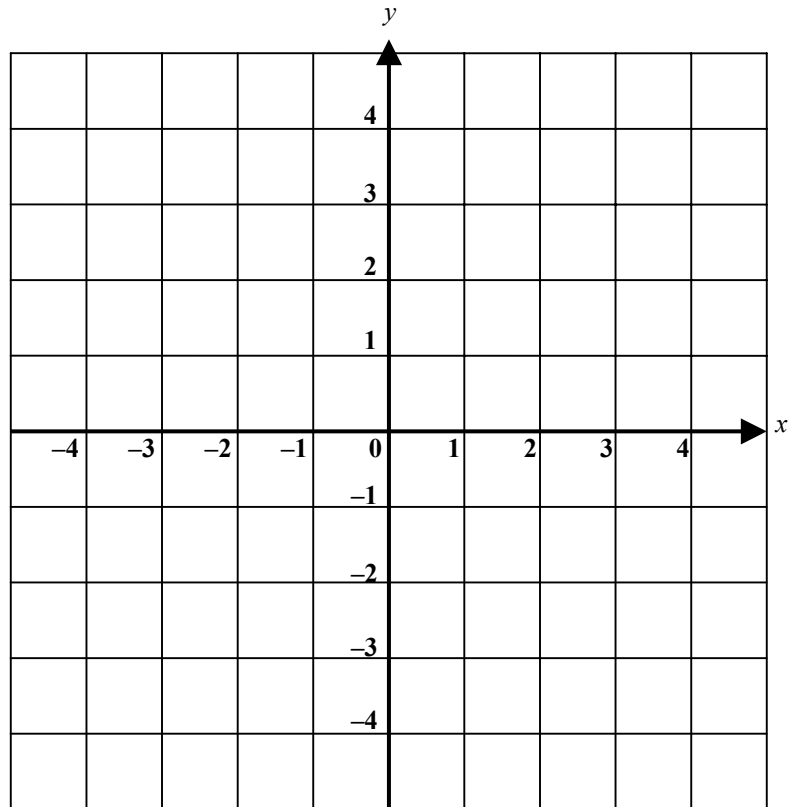
$$B = (3, 4)$$

$$C = (3, -2)$$

$$D = (-3, -2)$$

(b) Join A to B, B to C, C to D,
and D to A.

(c) What is the name of the shape
you have drawn?



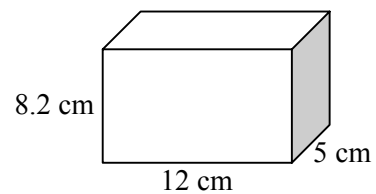
(8 marks)

12. (a) Complete: (i) $5176 \text{ cm}^3 =$ _____ litres (ii) $2464 \text{ cm} =$ _____ m.

(b) A closed box has the shape of a cuboid. The box is 12 cm long, 5 cm wide and 8.2 cm high.

(i) How many faces does the box have?

_____ faces.



(ii) What is the volume of the box?

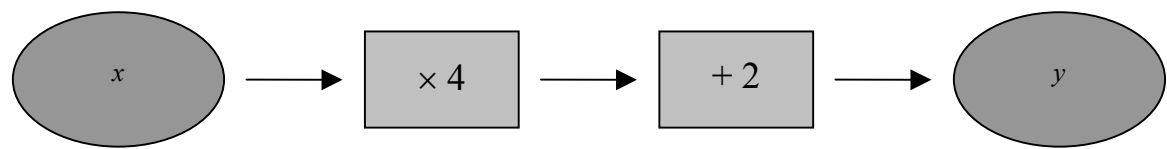
_____ cm^3 .

(iii) How many edges does the box have?

_____ edges

(8 marks)

13. The figure shows a function machine.



(a)Use the function machine to complete this table.

x	1	2	3	4	5	6	7	8
y	6	10	14					

(b) What will be the value of y when x is 8?

(c)What will be the value of y when x is 0?

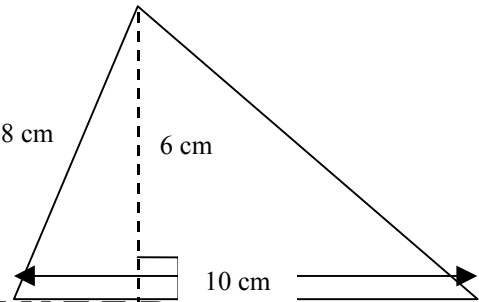
(d) What will be the value of x when y is 56?

8 marks)

14(a) (i) In the triangle: base = cm

 height = cm

(ii) Use your answers to find the area of the triangle.



14(b) One letter is chosen at random from the letters in the word **ENTER**.
What is the probability that it is:

(i) the letter **N** _____

(ii) the letter **E** _____

(iii) the letter **S** _____

(iv) a **vowel** _____

(8 marks)

15(a)(i) What is the mean of this set of numbers? _____

24	13	16	20	32
14	9	22	5	11

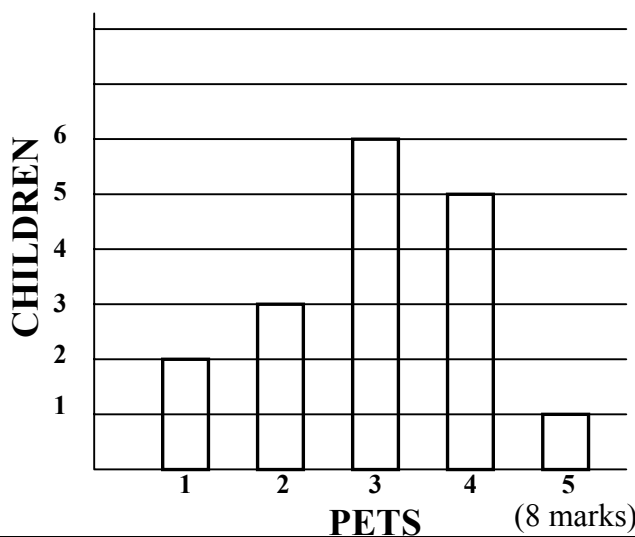
(ii) What is the range of the above set of numbers? _____

(b) A group of children were asked the number of pets they had at home. The following bar graph shows the results.

(i) How many children were there in the group?

(ii) How many children have more than **three** pets?

(iii) How many pets are there in all?



(8 marks)

END OF PAPER