THE REVOLUTIONARY GOVERNMENT OF ZANZIBAR

ZANZIBAR EXAMINATIONS COUNCIL

FORM ONE ENTRANCE EXAMINATION

104   **MATHEMATICS**

TIME: 2.30 HOURS   **TUESDAY 6TH DECEMBER, 2022 A.M**

INSTRUCTIONS TO CANDIDATES

1. This paper consists of two (2) sections A and B.
2. Answer ALL questions in section A and any FOUR (4) questions in section B.
3. Write your answers in the spaces provided.
4. Write your examination number on each page.
5. Use a blue or black pen in writing and diagrams must be in pencil.
6. Cellular phones, calculators and unauthorized materials are not allowed in the examination room.

FOR EXAMINER'S USE ONLY

QUESTION NUMBER	MARKS	SIGNATURE
1.		
2.		
3		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		
16.		
TOTAL		
CHECKER'S SIGNATURE		

This paper consists of 13 printed pages

SECTION A: (60 Marks)

Answer ALL questions in this section.

1. Calculate the square root of 576.

WORK SPACE

2. By using a number line calculate the value of $+7 - (-3)$.

WORK SPACE

3. If y is directly proportional to x and when $y = 12$, $x = 6$, calculate the value of x when $y = 6$.
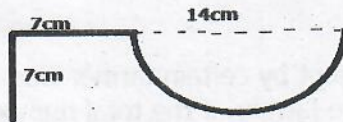
WORK SPACE

4. The ratio of hen to ducks kept by certain farmer was 3:9. Calculate the number of hens kept by the farmer, if the total number of hens and ducks were 60.

WORK SPACE

5. Convert 1138_{10} to base 3

WORK SPACE

6. Mr. Juma bent a length of wire as shown in the figure below.

Calculate the length of the wire

WORK SPACE

7. A man can make 4 chairs in 2 days. How many days will take to make 10 chairs?

WORK SPACE

8. Two bags of shopping weigh 8kg. If the first bag weighs 3kg 500g. Calculate the weight of the second bag.

WORK SPACE

SECTION B: (40 marks)

Answer FOUR (4) questions in this section.

11. a) Juma deposited *shs.* 600,000 in a savings account at the interest rate of 5% per annum. After how many years will the interest be *shs.* 60, 000?

WORK SPACE

b) A bicycle was bought at *sh.* 40,000 and sold at the profit of 6%. Find the profit.

WORK SPACE

12. a) Simplify $\frac{x-1}{4} + \frac{x+1}{2}$.

WORK SPACE

b) When number 15 is subtracted from x and the result was multiplied by 3 the answer was 60. Calculate the value of x.

WORK SPACE

13. a) Omar had a balance of 800 MB in his mobile phone and he sent one Whatsap message to each of his three friends. If each message takes 20MB. Calculate the remained MB balance in his mobile phone.
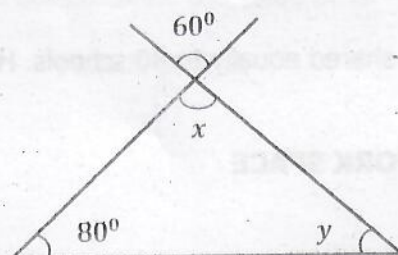
WORK SPACE

b) 360 litters of milk were shared equally to 40 schools. How many litters did each school get?

WORK SPACE

14. a) Calculate the value of y if the average of $2y, 18, 16, y,$ and 12 *is* 32

WORK SPACE

b) Calculate the value of angles x *and* y in the following diagram.

60^0

x

80^0 y

WORK SPACE

15. a) Calculate the value of $7(7^2 - 6^2) + 24 \div 6$

WORK SPACE

b) Calculate the volume of the cube whose side is 3cm long.

WORK SPACE

16. Given the coordinate points $A(-4,3), B(4,3), C(4,-5)$ and $D(-4,-5)$. Use the points given to answer the following questions.

   a) Use the graph paper to locate the point given on x-y plan

   b) Join the points you have located on x-y plan and then write the name of figure formed.

WORK SPACE