Examination Candidate number

PRESIDENT'S OFFICE

REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT,

KIBAHA TC, BAGAMOYO DC AND KINONDONI MC .

(KIBAKI)

FORM TWO JOINT PRE-NATIONAL EXAMINATION, 2023

CODE:041 BASIC MATHEMATICS

Time:2:30Hours Year:2023

Instructions

1. This paper Consist of ten (10) Compulsory questions
2. Show clearly all the working and answers in the space provided
3. All writing must be **in** blue or black ink except drawing which must be in pencil
4. NECTA Mathematical tables, geometric instruments and graph paper may be used where necessary.
5. All communication devices and calculators are not allowed in the examination **room.**
6. Write your Examination number at the top right hand corner of every page,

FOR EXAMINER USE ONLY		
QUESTION NO.	SCORE	SIGNATURE
`1		
2		
3		
4		
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6		
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8		
9		
10		
TOTAL		

Examination Candidate number…….

1. (a). A woman deposited 2,654,550 Tanzanian shillings in her bank account on Tuesday and withdraws 1,115,250 Tanzanian shillings on Thursday. If she deposited again 870,900 Tanzanian shillings on Saturday, how much money was in her account if the cost for withdrew all her money was 4700 Tanzanian shillings?

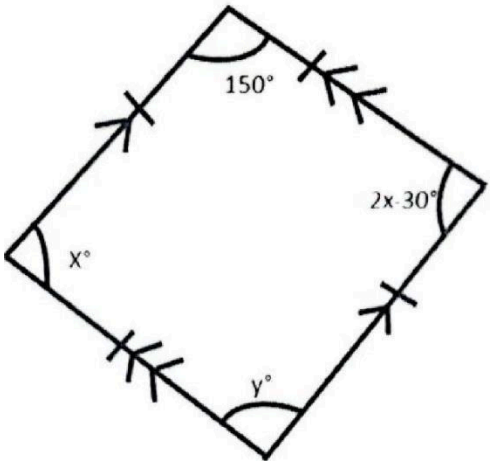
(b). Mary need to order pizza for 18 students. Each students get $\frac{1}{4}$ of pizza. How many pizzas should Mary order? How much pizza will be left over?

2. (a) (i). According to the Census of 2022, the population of Dar es Salaam was approximately to 18.64 million. Write the population correct to 3 significant figures'.

(ii) Estimate 108.45 ÷ 0.01120

(b). Alden is building a small brick wall that he wants to be 1.2 metres high. Each brick is 6cm Height, how many bricks high will the wall be?

3. (a) (i). Write the name of the polygon ABCD represented in the following figure.



(ii). From the figure given in part (a)(i) find the value of X and Y

((b) In two Concentric circle, if R is the radius of the larger circle, and r is the radius of the smaller circle, the area of the ring between the two circle is given

by $\mathbf{A = \pi (R^2 - r^2)}$. Find the area of the ring if R= 21cm and r= 7 cm take $\pi = \frac{22}{7}$

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4. (a) The sum of the two numbers is 209. If one number is 7 less than two times of the other. Find the two numbers

(b) A piece of wire 56cm long is bent to form a rectangle of area 171 cm^2. Find the dimensions of the rectangle.

5. (a) (i)The sum of three numbers is 98. If the ratio of the first to the second is 2:3 and that the second to the third is 5:8. Find the second number.

(ii) A mathematics club has 21 members of which 13 are females and the rest are males. What ratio of males to all club members?

(b) By selling a TV Set at Tsh 270,000 Mr. Rashid makes a loss of 10%. At what price must the shopkeeper sell the TV in order to get a profit of 20%.

6. (a) Find the equation, y-intercept and x — intercept of a line which passes through the point P (2,5) and 0 (5,7).

(b) (i) Find the point (6,-3) **is** moved by a transformation T to the point (6,3) what is T

(ii) Find the length of a drawing that represents **45** km when the scale is 1 cm to 900 m

7. (a)(i**).** Find the value of $\log \sqrt[3]{0.000001}$

(ii). Simplify $(\ )^{-3/2} + (27)^{4/3} + ()^{-2/3}$

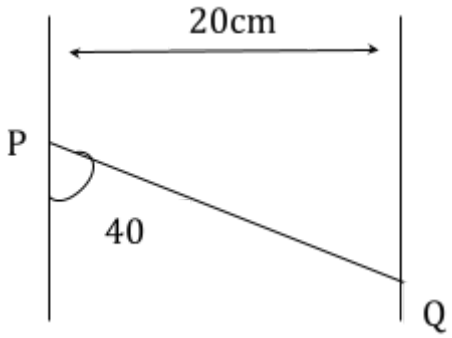
(b) A rectangular box contains 256.8cm^3 of air, If the length of the box is 7.35cm and the width is 4.83cm, by using logarithmic table find the length of the box.

8. (a). A tringle ABC is given such that $\overline{AC} = \overline{BC}$ and $\overline{DC}$ is a bisector of $B\hat{C}A$. Prove that $A\hat{D}C = B\hat{D}C$.

(b). If ΔPQR=ΔLMN and $\overline{PR}$ =20dm, $\overline{NL}$ = 10dm, NM = 12dm and LM = 9dm. Find the length of the other sides of ΔPQR

9. (a). A woman walks 500m up the side of a hill. If she has climbed a vertical distance of 300cm. Find the horizontal distance through which she has travelled.

(b). A river with parallel banks is 20cm wide. Find the distance $\overline{PQ}$ if P and Q are two points on either side of the river as shown in the following figure



GAME	NUMBER OF CHILDREN
RUGBY	20
TENNIS	40
HOCKEY	35
NETBALL	10
FOOTBALL	50
SQUASH	5

10. (a). The following table shows the number of children who play various games on a given day.

(i). Represent the data on a pie chart

(ii) If 35000/= was the amount payable to the children who play hockey. What was the total amount payable to the number of children who play games?

(b). Use the Venn diagram given below

(i) Write the relationship between set A and set B

(ii) Find (A B)

(iii) Find (B A')

(iv) Find (AB)'