PRESIDENT'S OFFICE
REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT
KILOSA DISTRICT
FORM TWO MOCK EXAMINATION SEPTEMBER 2019
041   **BASIC MATHEMATICS**

Time: 2:30 Hours

INSTRUCTION:

1. This paper consists of ten question (10) compulsory questions
2. Answer all questions clearly and show your answer booklet
3. Use blue or black pen, except for drawings use a pencil
4. Four figures and set of mathematics instruments may be used
5. Communication devices and calculators are not allowed in the examination room.
6. Write your examination number at the top right corner of every page of your answer sheet.

Number	Question	Score
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
Total		

QUESTIONS

1. (a) Approximate the following numbers
    (i) 0.0078 to one significant figure
    (ii) 789.98 to one decimal place

  (b) Simplify $72 \div (6 \times 6) \times 12 + 8 - 4$

2. (a) Write $0.4\dot{2}$ as percentage,

  (b) Divide the following and give your answer in meters.
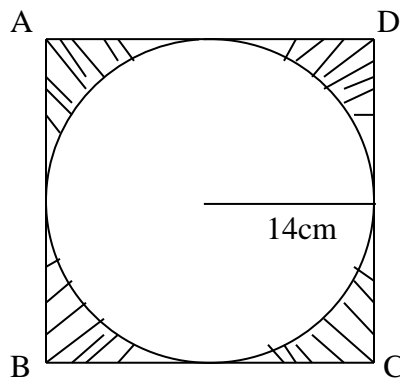
  (23Km   74dam   80dm) ÷ 6

3. (a) Solve for x ,

  $$\frac{x+5}{x-1} - 7 = 0$$

  (b) Find the product of LCM and GCF of 18, 24, and 42.

4 (a) The sum of the interior angles of a regular polygon is 1980^0. How many sides does the polygon have?

(b) In the figure below,

  (i) Find the area of the square ABCD

  (ii) Find the area of the circle

  (iii) Find the area of the shaded part

5. (a) Solve for x if $(4^{(x+3)})(16^x) = 8^{3x}$

  (b) Rationalize the denominator,

  $$\frac{a-b}{\sqrt{a}+\sqrt{b}}$$

6. (a) If U*V=UV+V

Find (i) 2*5
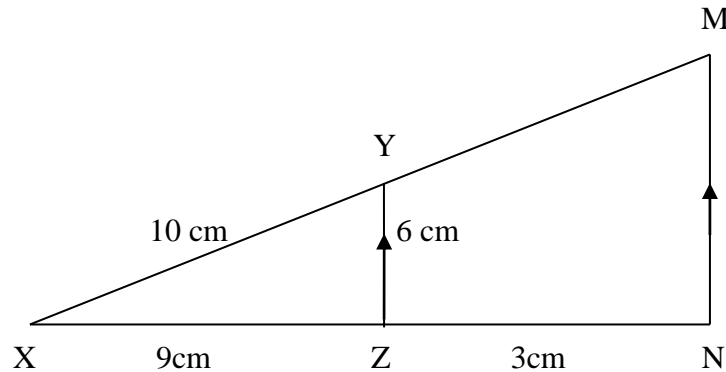
  (ii) x given that $(x*2)*5 = -45$

(b) A bicycle was bought at Tsh. 140,000 and then sold at a loss of 12% .What was its selling price?

7. (a) Find the equation of the line which passes through the two points (-1,1) and (2,5) in the form $ax + by + c = 0$

(b) Find the image of B(4,2) under a reflection in the x-axis.

8.   (a)   In figure below calculate
       (i) $\overline{MN}$ (ii) $\overline{MY}$

(b) If $\tan x° = \frac{5}{12}$, Find the value of $\cos x°$

9. (a) Three apples and two bananas cost 82 cent. Two apples and five bananas cost 95 cent. Find the cost of each fruit by using elimination method.

(b) Find the value of log 90, when log 2 = 0.30103, log 3 = 0.47712 and log 5 = 0.69897.

10. (a) There are 24 men at a meeting,12 are farmers, 18 are soldiers and 8 are both farmers and soldiers.

(i) How many are farmers or soldiers?

(ii) How many are neither farmers nor soldiers.

(b) The score of Mathematics test done by 50 form two students in a certain school are as shown   in the table below.

Marks (%)	45	50	55	60	65	70	75	80
No. of students	6	x+3	2x+3	x-2	9	4	5	2

(i) Find the value of x

(ii) Calculate the number of students who passed the examination, if the pass mark was 50%.