Candidate's index no…….

PRESIDENT'S OFFICE
REGIONAL ADMINSTRATIVE AND LOCAL GOVERNMENT
KIBAHA DISTRICT COUNCIL
FORM TWO MOCK EXAMINATION
SUBJECT: BASIC MATHEMATICS

CODE: 041

TIME: 2:30 HOURS TUESDAY, 29th SEPTEMBER, 2020

INSTRUCTIONS

1. This paper consists of TEN (10) Compulsory.
2. Show Cleary all the working and answers in the space provided.
3. All answers must be in blue or black except for drawings which must be in pencil
4. Four figures, mathematical tables, geometrical instruments and graph papers may be used where necessary.
5. Cellular phones and calculators are not allowed in the examination room.
6. Write your examination number at the top of every page.

FOR EXAMINER'S USE ONLY		
QUESTION NUMBER	**SCORES**	**INITIALS OF EXAMINER**
1.		
2.		
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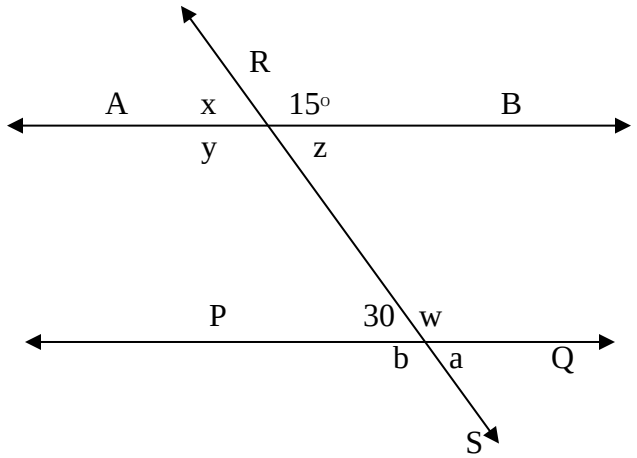
TOTAL		
Checker's initials		

Candidate's index no…….

1. Solve the following question
   a) calculate the sum of prime numbers between 60 and 80
   b) If x=3: y=-7; and z=8 find the value of $Z\left(\frac{(x-y)}{y+x}\right)$
2. Answer the following questions according to the instruction
   a) Juma plays football for $1\frac{1}{4}$ hours listen a radio for $\frac{3}{4}$ of an hours and then spends $1\frac{3}{4}$ hours doing his homework's' how much time in total does he spend doing all these activities ?
   b) Change $\frac{5}{8}$ into
      (i) Percentage
      (ii) Decimal

3. Answer the following question
   a) An employer increases the salaries of his employees in the ration 5:4. What will be new salary of some one who was earning Tsh. 225,000/= per month?
   b) A trader deposited Tsh. 400,000/= in bank for six months find the simple interest at the rate of 6.5% per annum

4. (a) In the following figure $\overline{AB}$ is parallel to $\overline{PQ}$ and $\overline{RS}$ is a transversal.
   Find the angles labelled a, b, w, x, y, and z



   (b) Find the perimeter of a right angled triangle whose base is (4-..)cm height is (4+)cm

5. (a)The sum of two numbers is 30.The difference between the large number and three times the smaller number is 2. Find the two numbers
   (b) Solve the equations $6x^2 - 13x + 6=0$ by factorization method
6. (a) Find the equation of a line whose gradient is 2 and y-intercept is 3.
   (b) (i) Find the image of A(2,4) under a reflection in the x-axis
   (ii) Find the image of B(1,2) after a rotation of -90˚

7. (a) Use logarithm to evaluate the following expression

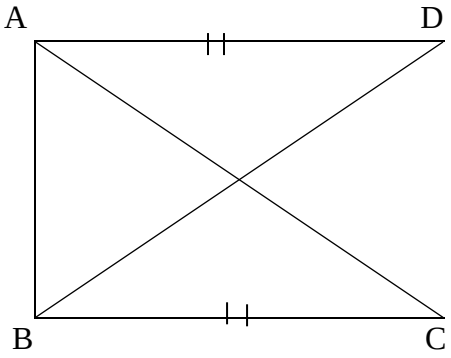
$$\frac{\sqrt{6576X13.45}}{1476x0.1216}$$

(b) Rationalize the denominator

$$\frac{\sqrt{3}+\sqrt{2}}{\sqrt{3}-\sqrt{2}}$$

8. (a) In a triangle ABC, D and E are points on sides AB and AC respectively.
AB = 8cm, AC = 12cm, AD=6cm and AE=9cm.
(i) Show that triangle ABC and triangle ADE are similar
(ii) If DE = 4.5cm find BC

(b) The figure bellow show that $\overline{AC}=\overline{BD}$, Prove that angle <ACB=angle <ADB



9. (a) The angle of elevation of the top of a tree is 22.The distance to the top of the tree is 80cm.How high is the tree?

(b) In a triangle ABC, angle< A=90,AC=6M and BC=8M.Find angle <C

10. (a) In a class of 42 students, 31 students study history and 26 study physics. Using a venn diagram or otherwise find the number of students who study physics only?

(b) The number of goals scored in 35 football matches are given in the table below.
Plot a frequency polygon to show the data

Number of goals	0	1	2	3	4	5	6
Frequency	10	6	8	4	3	3	1