MKALAMA DISTRICT COUNCIL

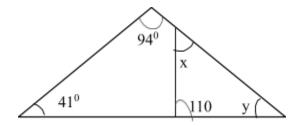
FORM TWO MOCK ASSESSMENT

BASIC MATHEMATICS

Time 2.30 Hours MAY, 2025

INSTRUCTIONS

- 1. This paper consists of Ten (10) Compulsory Questions, each question carries ten (10) marks
- 2. Show clearly all the working and answer in the space provided
- 3. All writing must be in blue or black ink except drawing which must be in pencil
- 4. **NECTA mathematic tables**, geometric instruments and graph paper may be used where necessary
- 5. Cellular phones and any unauthorized materials are not allowed in the examination room.
- 6. Write your assessment number on every page of your answer sheet(s)
- 1. a) Amina, Juma and Ally are training themselves about how to lap in their music. Amina, laps once every 9 minutes, Juma laps once every 15 minutes, and Ally laps every after 20 minutes. How long will it take for them to lap together?
 - b) The total mass of cotton harvested in Maswa district was 17 816 273 kg. Round off this Mass to the nearest;
 - i. Millions of kilograms
 - ii. Thousands of kilograms
- 2. a) Geoffrey spent $\frac{5}{9}$ of his income and remained with 88200 Tanzania shillings what was his income?
 - b) Which one is greater between 24 and 72? Show how you arrived to your answer
- 3. a) Calculate the size of angle x and y in the following figure



- b) The floor of a room is a square of length 5 meters. Find its Perimeter and Area
- 4. a) Evaluate $672^2 328^2$

- b) Given that $m*n = \frac{m-n}{m+n}$ find (3 *2)
- c) Solve $-2y^2 + 7y 6 = 0$ by using formula
- 5. a) If a:b=2:3 and b:c=5:6 find value of a:c=5:6
 - b) A shopkeeper bought a radio for Tsh 80,000 and sold it a profit of 20%. What were the profit and selling price?
- 6. a) Find the image of point P(3, 1) when it is;
 - i. Reflected in the x axis
 - ii. Reflected in the line y = x
 - b) Find the equation of the straight line in form of y = mx + c passing through the point (-4, 5) and (-2, 1)
- 7. a) solve for x in $\left(\frac{3}{5}\right)^{x-6} = \left(\frac{25}{9}\right)^x$
 - b) i). Given log 3 = 0.4771 and log 5 = 0.6990. Evaluate log 45
 - ii) Rationalize the denominator of the following expression, $\frac{\sqrt{2}}{\sqrt{3}+\sqrt{2}}$
- 8. (a) Find the solution of |2x + 1| > 3 and represent it on a number line
 - b) Given that $T = 2\pi\sqrt{\frac{L}{G}}$ make "L" the subject of the formula
- 9. a) Find the exact value of $2\sin 60^{\circ} + \cos 30^{\circ}$
 - b) The adjacent sides of right angled triangle have lengths 5cm and 12cm .Find the length of the hypotenuse.
- 10. (a) Solve the following simultaneous equations by substitution method.

$$3x - 2y = 8$$

$$2x + 5y = -1$$

(b) John is 6 years older than Amina. If the sum of their ages is 30 years, find Amina's age.