



THE UNITED REPUBLIC OF TANZANIA

REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT

DR TULIA ACKSON SECONDARY SCHOOL

FORM ONE HOME PACKAGE EXAMINATION ASSESSMENT

043

MATHEMATICS

TIME: 2:30 Hours Thursday, 27th August 2026

Instructions

1. This paper consists of ten **(10)** questions.
2. Answer all questions.
3. Write your **Full Name** at the top right corner in the space provided.
4. Communication devices and any unauthorized materials are not allowed in the examination room.
5. Non-programmable calculators and mathematical tables may be used.

FOR ASSESSOR'S USE ONLY		
QUESTION NUMBER	SCORE	ASSESSOR'S INITIALS
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
TOTAL		

1. (a) Describe the “*Concept of mathematics*”. (3 marks)
- (b) Explain **five (5)** mathematical skills that are useful in your daily life activities. (5 marks)
- (c) Briefly explain **two (2)** areas where we apply mathematics. (2 marks)

2. (a) Given that $m = 0.\dot{2}$ and $n = 0.0\dot{4}$, show that $m^2 = n(m + 1)$. (3 marks)
- (b) Convert $0.\dot{1}$ into fraction and hence find the value of $(0.\dot{1} \times 27)$. (3 marks)
- (c) Evaluate $0.\dot{2} + 0.5\dot{1}$ giving your answer as a fraction. (4 marks)

3. (a) If x is an integer, locate each of the following on a number line.
 - (i) $1 -$ is less than x and x is less than 4. (2.5 marks)
 - (ii) $2 -$ is less than or equal to x and x is less than or equal to 6. (2.5 marks)
- (b) Find an irrational number such that $x^2 = 7$. (5 marks)

4. (a) Write 90628.02415 correct to:
 - (i) 3 decimal places. (2 marks)
 - (ii) 2 significant figures. (2 marks)
- (b) A man gave $\frac{7}{25}$ of his money to his son, $\frac{2}{9}$ of the remaining amount to his daughter, and the rest amount to his wife. If his wife got Tshs 11,990,300/=;
 - (i) How much money to the nearest ten thousand did the man have in total? (3 marks)
 - (ii) Estimate the amount of money to the nearest hundred thousand collected by his daughter. (3 marks)

5. (a) Show that $|x - y| = |y - x|$ for all real numbers x and y . (3 marks)
- (b) The denominator of a fraction exceeds the numerator by 5. If 4 is subtracted from the numerator and the denominator remains unchanged, the resulting fraction is $\frac{2}{5}$. Find the original fraction. (4 marks)
- (c) A line segment AB, which is 24 cm long, is divided at a point P (between A and B) in the ratio 7:5. Find the lengths of $\overline{AP}$ and $\overline{PB}$. (3 marks)

6. (a) A certain school placed two orders with the stationery dealers. The first order was 50 boxes of marker pens and 20 boxes of correction fluid for the total amount of 40,000/= Tanzanian shillings. The second order was 10 boxes of marker pens and 20 boxes of correction fluid for the total amount of 24,000/= Tanzanian shillings.
 - (i) Formulate a system of simultaneous equations that describes the cost of a box of marker pen and a box of correction fluid. (2 marks)
 - (ii) Calculate the cost of a box of marker pens. (3 marks)

- (b) Determine the solution of the following inequalities. $3(2x + 1) \leq 2(x - 1)$. **(4 marks)**
7. (a) Solve the following equation by using substitution methods: $\begin{cases} \frac{16}{x} - \frac{24}{y} = -6 \\ \frac{5}{x} + \frac{9}{2y} = 9 \end{cases}$ **(6 marks)**
- (b) The sum of two consecutive integers is at least negative fifteen. What are the smallest values of the consecutive integers that will make it true? **(4 marks)**
8. (a) Given the set numbers, $-5, 0, 12, -3.416520 \dots, 2.85, 7.14, 12.64646464, \frac{11}{5}, -\frac{3}{5}, -2\frac{1}{3}$. State which of these numbers are;
- (i) Positive rational numbers. **(2 marks)**
- (ii) Negative rational number. **(2 marks)**
- (iii) Irrational numbers. **(2 marks)**
- (b) The base of a lid of bucket has an area of $\frac{25}{485}\pi m^2$. Find its diameter in decimal. **(4 marks)**
9. (a) Express each of the following statements in symbolic form.
- (i) “ x is greater than 7”. **(1.5 marks)**
- (ii) “ y is not equal to 10”. **(1.5 marks)**
- (b) Evaluate the following expression when $a = -2, b = 4, c = -1$ and $d = 3$.
 $-\frac{3}{4}b + \frac{1}{2}(ac + bd^2)$. **(5 marks)**
- (c) Insert a correct inequality symbols in the box to make a true statement.
 if $a > b$, then $a \times (-9)$ $b \times (-9)$. **(2 marks)**
10. (a) A line has an equation $ax + (a - 1)y + 2a = 0$. If the line has y-intercept at $(0, 2)$, find the value of a . **(4 marks)**
- (b) Find the equation of a line with slope $\frac{2}{3}$ having the same y - intercept as the line $2x - 5y + 20 = 0$. Express your answer in the form of $ax + by + c = 0$. **(6 marks)**

“Every Great Achievement Starts with Mathematics”

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