DR TULIA ACKSON SECONDARY SCHOOL MATHEMATICS FORM ONE MIDTERM EXAMS AUGUST 2026

THE UNITED REPUBLIC OF TANZANIA

REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT

DR TULIA ACKSON SECONDARY SCHOOL

FORM ONE MID TERM EXAMINATION ASSESMENT

043 MATHEMATICS

TIME: 2:30 Hours **Monday, 24th 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		

Skullelibrary.com

1.(a) Mathematics is all around us. Almost everything we do involve mathematics. Also, mathematics is related to other subjects in a very unique way. With **vivid** examples explain how each of the following subjects is connected to mathematics

(i) Mathematics and History. **(2 marks)**

(ii) Mathematics and Biology. **(2 marks)**

(b) Write 54628.02415 correct to

(i) 4 significant figures. **(1.5 marks)**

(ii) 4 decimal places. **(1.5 marks)**

(c) Estimate the value of $430 \div 31.2$ by rounding each number to the nearest tens. **(3 marks)**

2. (a) Given $x = 0.\dot{6}$ and $y = 0.\dot{3}$, verify that $y^2 = x^2 + x$. **(3.5 marks)**

(b) Show that $0.4\ddot{6} = \frac{46}{99}$. **(3 marks)**

(c) Given $x = 2.\dot{6}$ and $y = 2.8\dot{6}$, find the value of $\frac{x}{y}$. **(3.5 marks)**

3.(a) Simplify each of the following algebraic expressions and use the given value to evaluate the simplified expression.

(i) $26 + 2b - 6c - 3b + 6c, if\ c = 5\ and\ b = -4.$ **(2.5 marks)**

(ii) $4x^2y^3 - 6k^3l + 10xy^3 - 4kl^3, given\ that\ x = 1, y = 2, k = -2\ and\ l = -3.$ **(2.5 marks)**

(b) Solve the following simultaneous equations by using substitution methods. **(5 marks)**

$$\begin{cases} 6x + y = 15 \\ 3x + y = 6 \end{cases}$$

4. (a) If $r = 5$, find all possible solutions to the following equation $|x - r| = |r - 2x|$ and graph it on a number line. **(5 marks)**

(b) When the sum of n and $(n + 3)$ numbers is multiplied by 5, the result is two times the difference between the larger number and the smaller number. **(5 marks)**

5. (a) A certain amount of money was divided in the ratio of $2:3:5$, if the difference between the largest share and the smallest share was $Tsh\ 7500$, find the largest share. **(3 marks)**

(b) Three people share a property in the ratio of $2: x: y$. It is also known that $y = x + 2$. If the largest shareholder had $Tsh\ 39{,}100/=$ in monetary terms, find the value of this property. **(3.5 marks)**

(c) Find $(5x - 2y):(3x - y)$ in its lowest form if $x : y = 4:9$. **(3.5 marks)**

6. (a) Write five irrational numbers with denominators as irrational numbers. **(3 marks)**

a

Shulelibrary.com

(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)**

(c) Represent on a number line all real numbers x such that $x < \frac{5}{3}$. **(3 marks)**

7. (a) Vanessa had some amount of money she spend $\frac{1}{8}$ in transport, $\frac{3}{7}$ in clothes and $\frac{1}{4}$ of the remained in food. She spends the rest of money in buying mobile phone if the amount used to buy mobile phone is $44,000/=$. how much money did she spend in transport and clothes? **(5 marks)**

(b) In a school garden there are 10 rows of beans seedlings wit 16 beans seedlings per each row and 13 row of maize seedlings with 15 maizes in each row. How many seedlings of each kind are there? **(5 marks)**

8. (a) A box contains 7 pencils. There are 251 pencils to be packed in these boxes. Approximate the required number of boxes and determine the number of pencils which will left unpacked. **(5 marks)**

(b) A clothing shop sells t-shirts which are in three colours red, blue and green. The colours are in the ratio of 3 to 4 to 5 respectively. If they shop has 20 blue t-shirts how many t-shirts are there in the shop? **(5 marks)**

9. (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. Calculate the cost of a box of marker pens and a box of correction fluid. **(5 marks)**

(b) In a village water project, a deep well is to be drilled. The temperature at x meters below the Earth's surface is given by $T = 30 + 25(X - 3),\ 5 \leq X \leq 75$where T is the temperature in degrees of Celsius. What is the minimum depth for the temperature to be greater or equal to 155°? **(5 marks)**

10. (a) If a line $mx + ny = 12$ passes through points $(1, -2)$ and $(4,1)$. Find the values of m and n. **(5 marks)**

(b) Two The straight line has the x-intercepts and y-intercepts of -3 and 4 respectively. Determine its equation in the form of $y = mx + c$. **(5 marks)**

Shulelibrary.com