



TANZANIA HEADS OF ISLAMIC SCHOOLS COUNCIL

FORM TWO INTER ISLAMIC MOCK ASSESSMENT

MATHEMATICS

043

TIME: 2:30 Hours

Thursday, 30th July 2026 a.m.

Instructions

1. This paper consists of ten (10) compulsory questions.
2. Answer **all** questions.
3. Each question carries ten (10) marks.
4. Show all the working and answers in the spaces provided.
5. All writings must be in blue or black ink, except for drawings, which must be in pencil.
6. Communication devices and any unauthorised materials are not allowed in the assessment room.
7. Write your Assessment Number at the top right corner of every page of this paper.

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

1. (a) If $x = 0.\dot{2}$ and $y = 0.\dot{3}$, evaluate each of the following:

(i) $x + y$

(ii) xy

(b) A clothing shop sells trousers which are in the three colours: blue, white and green. The colours are in the ratio 3:4:5. If the shop has 20 white trousers, how many blue and green trousers are there in the shop?

2. (a) (i) Given that $A:B = 3:5$, $A:C = 6:7$. Find $A: B: C$.

(ii) How many Tanzanian shillings can a visitor from Kenya get for exchanging 80% of 930 KSh? Given that 1 Ksh = 20 Tsh.

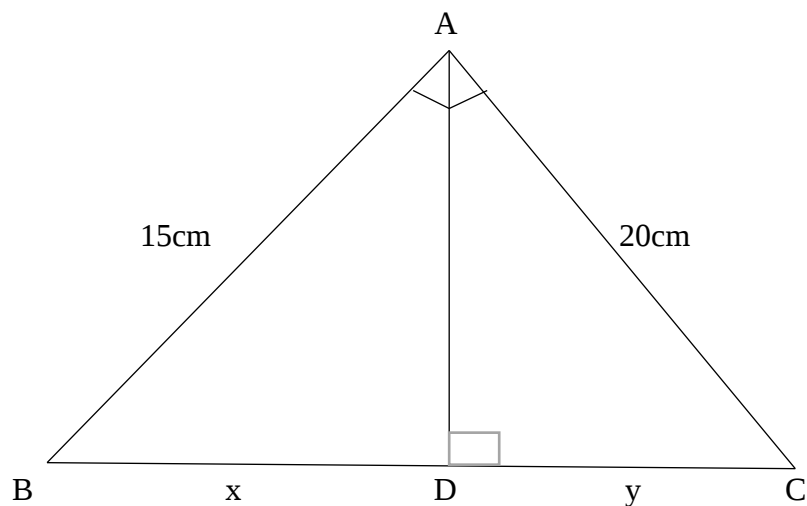
- (b) The monthly rent for an apartment varies directly with its area and inversely with the number of roommates. If Tsh 400,000 is the rent for an apartment of 900 square units with 3 roommates, find the rent for an apartment of 1200 square units with 4 roommates.

3. (a) A train can carry 150 passengers in one trip if it makes 16 trips a day. Estimate to the nearest ten thousand, the number of passengers the train can carry for 5 days.

- (b) There are 64 pipes, each of length 4.2m, arranged horizontally end to end. Estimate the length of all pipes.

- (c) Workout $67.3 \times \frac{1}{4.96}$ Give your answer to the nearest whole number.

4. (a) On the given diagram below: $\triangle ABC \sim \triangle DAC$. Find the length x and y .



- (b) Prove that the sum of the interior angles of a triangle is 180° .

5. (a) If $(3^{x+3})(5^{2-y}) = \left(\frac{1}{3}\right)^4 \left(\frac{1}{5}\right)^8$. Find the product of x and y .

(b) Given $\frac{\sqrt{3}}{\sqrt{5}+\sqrt{3}} = \frac{a+\sqrt{b}}{c}$. Find the value of a, b and c.

(c) Given that $\log 2 = 0.3010$, $\log 5 = 0.6990$ and $\log 7 = 0.8451$ without using calculator or mathematical table, evaluate $\log\left(\frac{35}{2}\right)$.

6. (a) In the form two class at Mjimwema Secondary School, the sum of the numbers of boys and girls is 36. Suppose the number of girls is twice the number of boys, and the number of girls exceeds the number of boys by 12. Find the number of boys and girls in the class.

(b) The ages of a man and his son are 35 and 9 years, respectively. How many years ago was the product of their ages, 87 years?

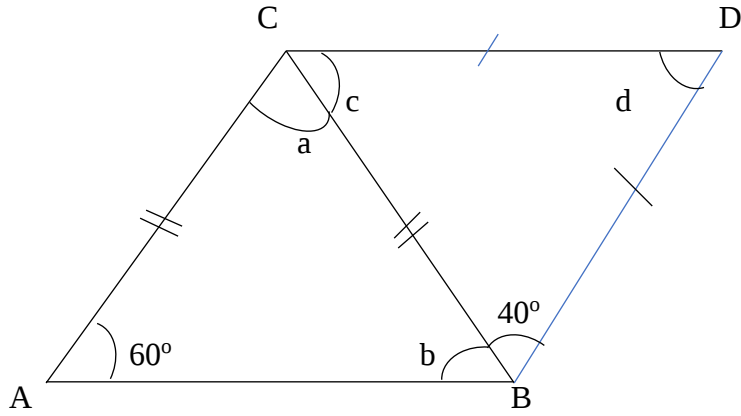
7. (a) Consider a universal set $\mu = \{1, 2, 3, \dots, 25\}$ and set $A = \{\text{multiples of } 3\}$, $B = \{\text{Factors of } 18\}$ are subsets of μ . Find:

(i) $n(A \cap B)$

(ii) $n(A \cup B)'$

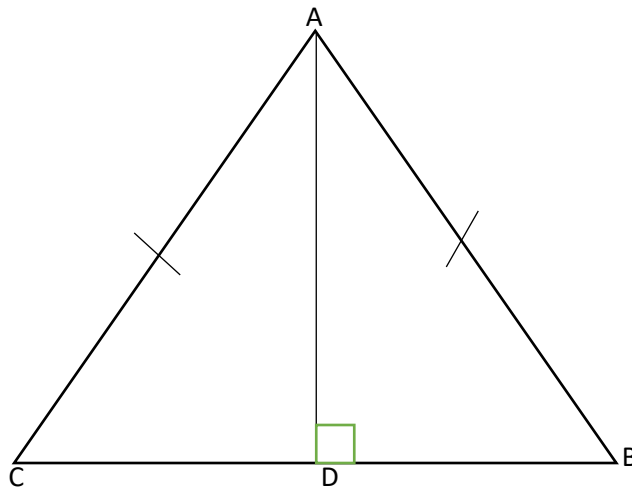
- (b) In a certain village, 300 people were interviewed about their food preferences. It was found that 200 people like bananas, 120 people like rice, and 60 people like both bananas and rice. By using a formula, find the number of people who like neither banana nor rice.

8. (a) Use the following figure to find the values of a , b , c and d .



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- (b) Given that $\overline{AC} = \overline{AB}$. Use a figure below to prove that D is the midpoint of side BC.



9. (a) The gradient of a straight line passing through A (n, 3) and B (4, 5) is $\frac{2}{3}$. Find the value of n.

- (b) Calculate the gradient and coordinates of the y-intercept of the line whose equation is $2x + 3y = 12$.

10. (a) A triangle ABC has a right angle at C. If $10\cos A = 5$.

(i) Draw the triangle ABC.

(ii) Find the value of $5\sin A \cos A$.

- (b) A tree casts a shadow of 60cm when the angle of elevation of the sun is 60° . Find the height of the tree.

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