

PRESIDENT'S OFFICE
REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT
FRANCISCAN GIRL'S SECONDARY SCHOOL
FORM ONE OPENING EXAMINATION

041

BASIC MATHEMATICS

Time : 2:30 Hours

16TH JULY 2024

Instructions

1. This paper consists of **ten (10)** compulsory questions. Each question carries **ten (10)** marks.
2. Show clearly all the workings and answers in the space provided.
3. All writing must be in blue or black ink except drawings which must be in pencil.

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) Franciscan girls secondary school decided to buy 724, 985, and 1389 textbooks for three subjects (Physics, Chemistry and Basic mathematics) respectively. If each textbook costs 9 000 Tanzanian shillings. How much money did the school spend on the textbook ?

(b) Shelly walked $\frac{1}{3}$ km. Kelly walked $\frac{4}{15}$ km. Who walked farther ? How much further did the one walk than the other ?

2. (a) Simplify the expression $10 - 7 + 9 \times 5 + 28 \div 4$

(b) Find the G.C.F of the following
(i) 18 and 45 by listing method

(ii) 120 and 192 by prime factorization

3. (a) Approximate the following numbers as instructed

(i) 10.6987 to 3 significant figures

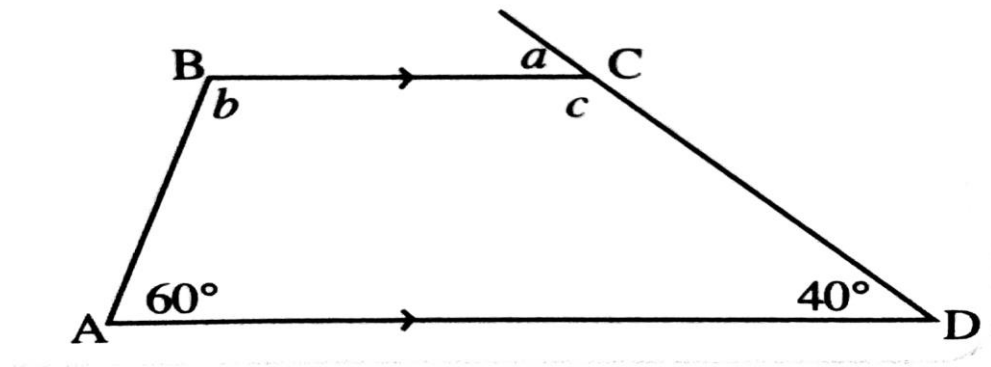
(ii) 0.2465 to 3 decimal places

(iii) 35.4 to ones

(b) Sir mlangi was reading a book which has 326 pages with an average of 268.75 words on each page. Estimate the number of words in the book to whole number

4. (a) If $2x + 70^\circ$ and $3x + 20^\circ$ are supplementary angles, determine the value of x

- (b) If ABCD is a trapezium, find the values of the angles a , b , and c in the following figure



5. (a) If $12x + y = 5(2x - y)$, find the value of $\frac{x}{y}$

(b) Show on the number line the solution set of the inequality $3 \leq |2x - 5|$

6. (a) There are 50 students in a class. If 14% are absent on a particular day. Find the number of students present in the class.

(b) Solve the following system of simultaneous equation by substitution

method
$$\begin{cases} 5x - 4y = 21 \\ 3x + 5y = 20 \end{cases}$$

7. (a) A father is 32 years older than his son. After 4 years, the father's age will be twice the age of his son. Find their current ages.

(b) A shopkeeper bought a radio for Tsh. 80,000 and sold it at a loss of 20% . What were the loss and selling price ?

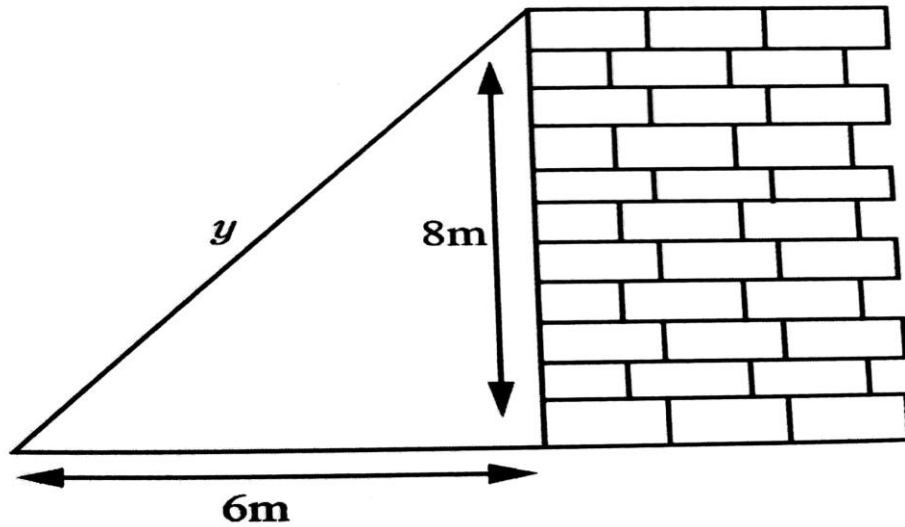
8. (a) Describe set $A = \{\text{Even numbers between 5 and 15}\}$ by;

(i) Listing method

(ii) Formula method

(b) In an inter school competition test, 200 students appeared. Out of these students; 20% got A, 50% got B and the remaining got a C grade, find the number of students who got a C grade.

9. (a) A ladder leans against a wall. If the ladder reaches 8 m up the wall and its foot is 6 m away from the base of the wall, as shown



Find

(i) The length of the ladder y

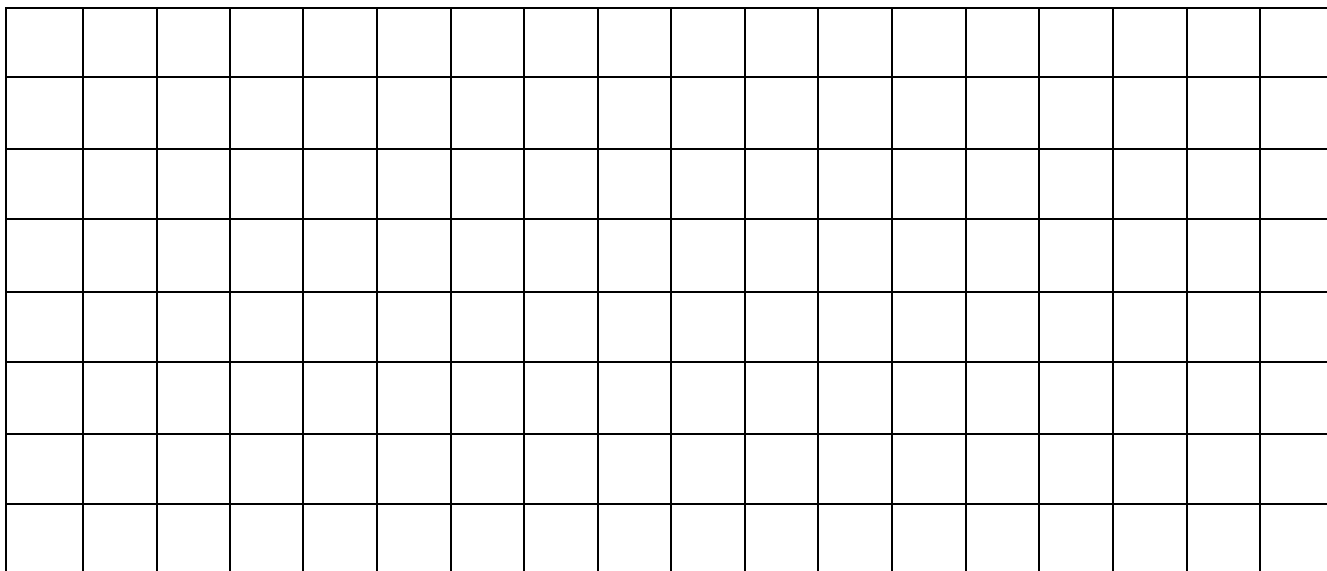
(ii) The area and perimeter of the resulting triangle

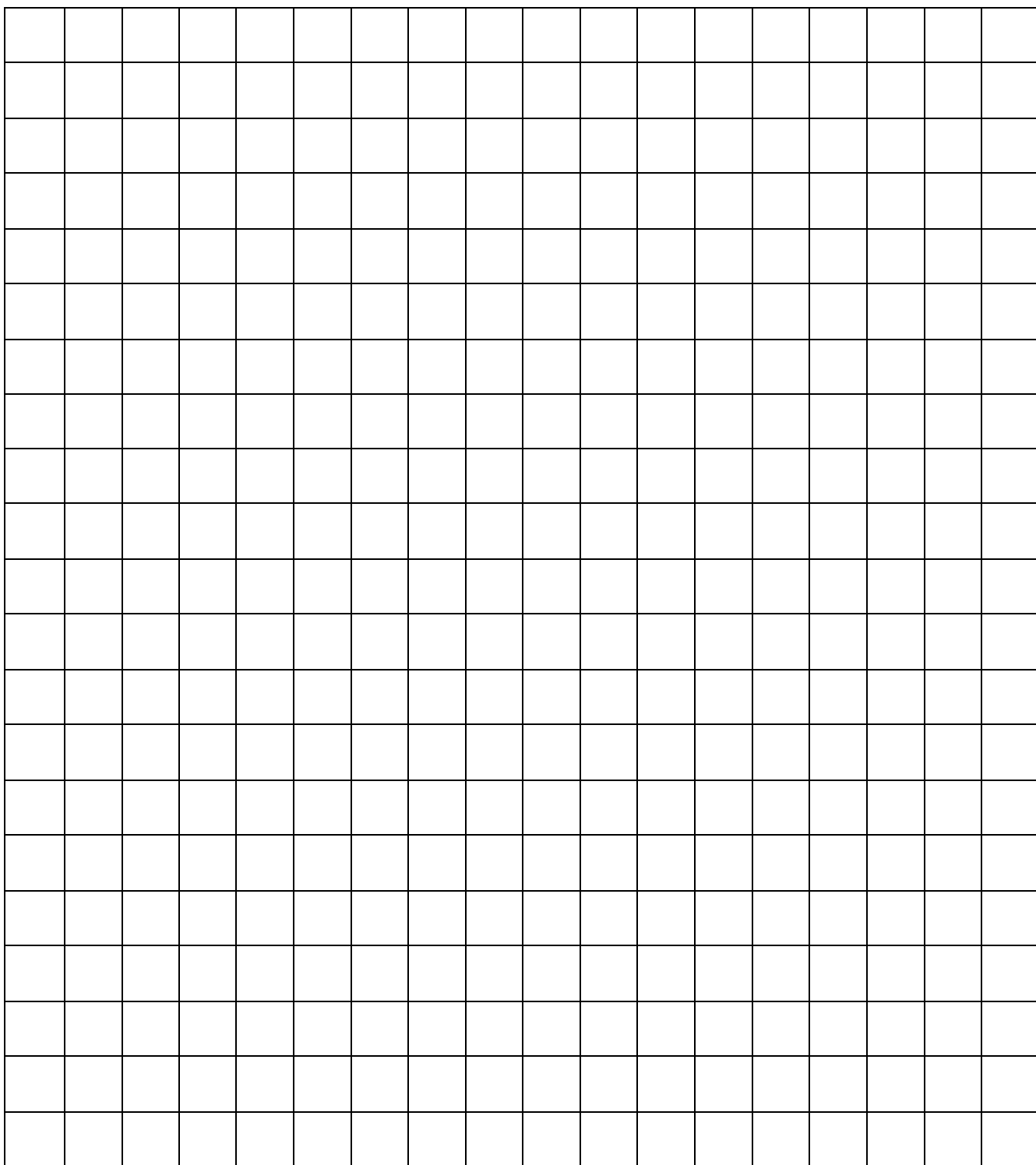
(b) A rope of length 39 m is tied to the top of a flag pole. The other end of the rope is fixed at a point 36 m from the base of the flagpole. How high is the flag pole ?

10. (a) Find the equation of a straight line which crosses x and y axes at 2 and 5 respectively. Express your answer in form of $y = mx + c$

- (b) Solve the following simultaneous equation graphically

$$\begin{cases} x + y = 5 \\ 2x - y = 7 \end{cases}$$





********ALL THE BEST********

“The best way of learning mathematics is through practice”

Prepared By Sir Mlangi JULY 2024