GENDA SECONDARY SCHOOL
FORM TWO SPECIAL ASSESMENT SERIES 02
BASIC MATHEMATICS

TIME 2:30 Hours **July, 2025.**

INSTRUCTIONS

1. This paper consists of ten (10) compulsory questions. Each question carries ten (10) marks
2. Show clearly all the working and answers in the space provided
3. All writing must be in blue or black ink except drawings which must be in pencil
4. NECTA mathematical tables, geometric instruments and graphs papers may be used where necessary
5. All communication devices and calculators are not allowed in the examination room
6. Write your examination number at the top right hand corner of every page.

1. (a) Mwajuma deposited Tshs. 360,000 in her account. If the bank charges Tshs. 1000 for every withdrawal, calculate the amount of money remained in her account if:

   i. She withdrew Tshs 106,000

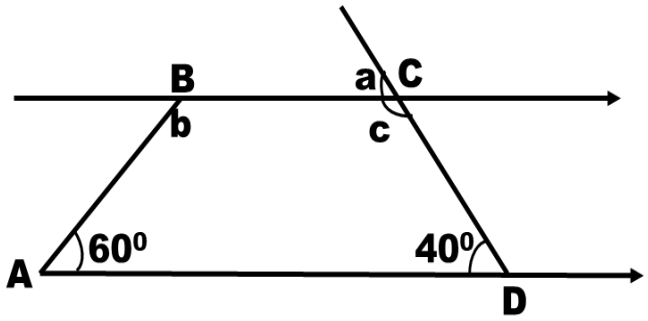
   ii. She makes a further withdrawal of Tshs 50,000 from the remaining amount

   (b) Re write 2.43 as mixed fraction.

2. (a) Arrange the given fractions in ascending order of magnitude: $\frac{2}{3}, \frac{4}{7}, \frac{3}{8}$ and $\frac{5}{9}$

   (b) In the year 2016 the population of Mericho village was 2,800. In 2017 the population increased by 8%. What was the population in 2017?

3. (a) If ABCD is a trapezium, find the values of the angles marked a, b and c.



(b) The side of a square carpet is 14m. If a designer decides to make the largest possible circular carpet

i. What will be the area of the former circular carpet?

ii. Find that area of the remaining part of the carpet.

4. (a) If $\frac{6y+1}{4} = \frac{5(y+5)}{6}$, Find the value of y correct to three significant figures

(b) The length of a book exceed its width by 5cm. Calculate the dimensions of the book given that its area is 50cm^2.

5. (a) Find the gradient of the line joining the points (-1, 2) and (3, -5).

(b) Find the image of the point p(-3,7) after a reflection in the x-axis and then in y-axis.

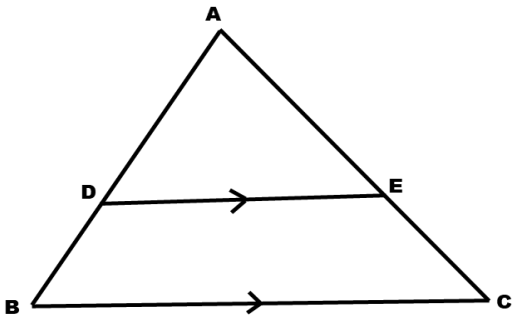
6. (a) Solve for n in the equation $16^{(3-n)} \times 2^{3+n)} = \frac{1}{2}$. Leave the answer in improper fraction form.

(b) Find the value of x in the equation $\log log\left(2x^2 + 1\right) + log4 = (7x^2 + 8)$

7. (a) If 1000 tonnes of maize were shared among 25 schools, how many kilograms did each school get?

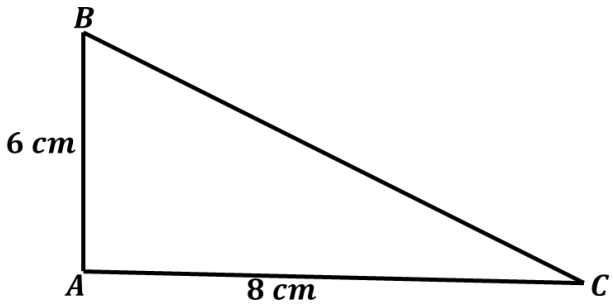
(b) A shopkeeper bought a radio for She.80,000 and add it at a profit of 20%. What were the profit and selling price?

8. (a) In the given figure, $\overline{AD}: \overline{BD} = \frac{3}{5}$ and $\overline{AC} = 9.6cm$. Find the length of $\overline{AE}$



(b) ABC is a triangle in which $\overline{AB} = \overline{AC}$ and D is mid-point of ABC. Prove that $\hat{ABD} = \hat{ACD}$

9. (a) Calculate the length of BC in the following figure.



(b) The angle of elevation of the top of a building from a point on the ground is 25. If the point on the ground is 80m from the base of the building, find the height of the building correct to one decimal place.

10. At a certain school, 250 students attended on the first day of re-opening the school, 350 students attended on the second day and 150 students attended on both first and second day. It was further noted that 10 students were absent on both days. If all registered students were supposed to attend the school on both days; how many students did the school have? Do not use Venn diagram.

(b) The grade on a mathematics test take by 100 students are as shown in the following distribution table.

Marks	50-59	60-69	70-79	80-89	90-99
No of students	3	21	32	27	17

i. What is the size of each class interval?

ii. Which range of marks were scored by high number of students?

iii. Find the class marks of the interval 90-99

iv. If the pass mark was 70, how many students passed

v. Give the number of students who failed the test.