



# THE E-LEARN EXAMINATIONS BOARD

## NATIONAL **SPECIAL MOCK**

2025

MATHEMATICS

***Time Allowed: 2 hours 30 minutes***

Index No.

Random No.						Personal No.		

**Candidate's Name:** .....

**Candidate's Signature:** .....

**School Name:** .....

**Read the following instructions carefully:**

1. Do not write your **district name** anywhere on this paper.
2. This paper has **two** sections: **A** and **B**. Section **A** has **20** questions and section **B** has **12** questions. The paper has **12 printed pages**.
3. Answer **all** questions. **All** the working for both sections **A** and **B** must be shown in the spaces provided.
4. **All** the working **must** be done using a **blue** or **black** ball point pen or ink. Any work done in pencil other than graphs and diagrams will **not** be marked.
5. **No calculators** are allowed in the examination room.
6. Unnecessary **changes** in your work and handwriting that cannot be read easily may lead to **loss of marks**.
7. Do not fill anything in the table indicated **"FOR EXAMINERS' USE ONLY"** and boxes inside the question paper.

FOR EXAMINERS' USE ONLY		
QN. NO.	MARKS	EXR'S NO.
1 – 5		
6 – 10		
11 – 15		
16 – 20		
21 – 22		
23 – 24		
25 – 26		
27 – 28		
29 – 30		
31 – 32		
TOTAL		

## SECTION A: 40 MARKS

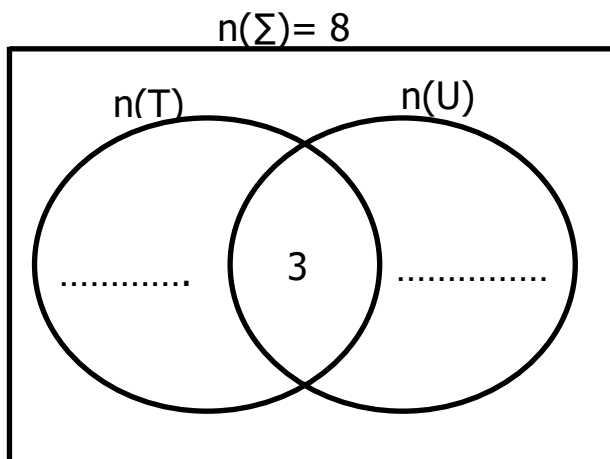
Answer all the questions in this section.  
Questions **1** to **20** carry **two** marks each.

1. Work out:  $435 - 232$

2. Write in numerals:  
"Seven hundred seven thousand seven"

3. Simplify:  $(2 - 4g) - (g - 3)$

4. Given that:  
 $U = \{\text{the first five odd numbers}\}$   
 $T = \{2, 3, 5, 7, 11, 13\}$   
Use the information above and complete the Venn diagram below:

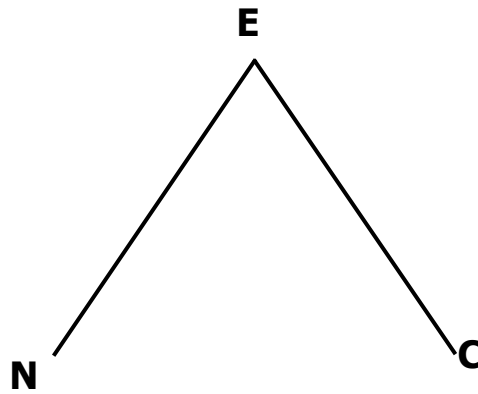


5. Find the square of the missing number in the sequence below:

....., 21, 14, 9, 6, 4

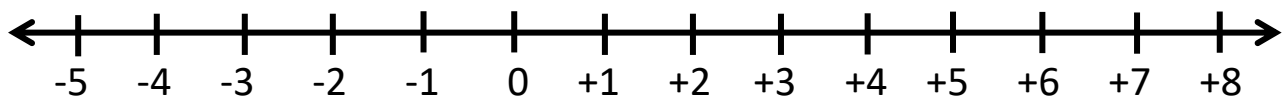


6. Using a pencil and a pair of compasses only, bisect a reflex angle **NEC**.



7. Simplify:  
 $(0.64 - 0.54) + 0.36$

8. Use the number line to work out the statement below:  
 **$-4 - +7$**



9. Oketch got a profit of  $13 \frac{1}{2}\%$  of his cost price.  
If he bought an acre of land in Oyam district at sh. 1200000.  
Calculate the amount of money he sold the land after a certain period of time.

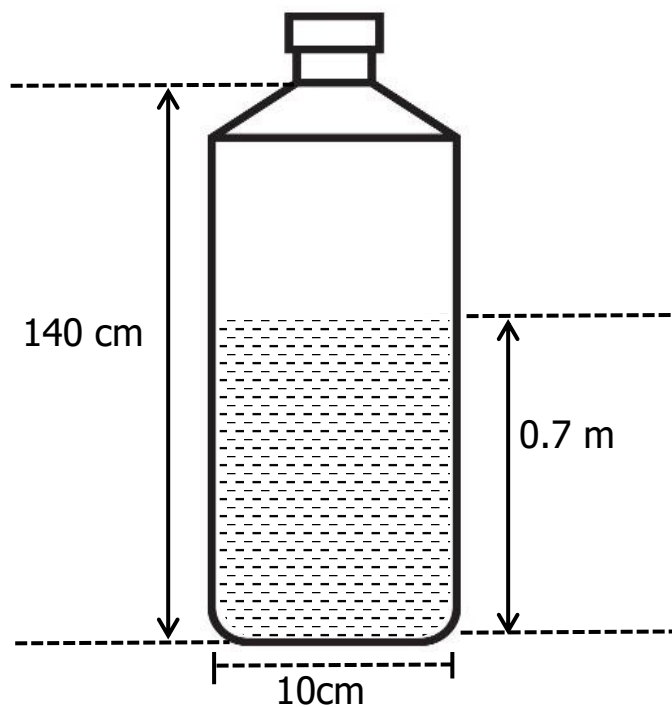
10. The median of 3 consecutive integers is 5.  
Find the product of the third number and a seventh.



11. Two quarters of 🍏 🍏 cost **sh.1200**.  
At the same rate, how many apples can one buy for **sh. 8400**?  
Draw pictograms to represent your answer.

12. Evaluate  $\sqrt{\frac{nm}{k}}$ , where  $n = m = \frac{k}{2} = 8$

13. The cylindrical water bottle below has a volume of **11,000 cm<sup>3</sup>** when full. How many litres remained in the bottle after Jayden took some of the liquid to his best friend during the 2024 Christmas season?



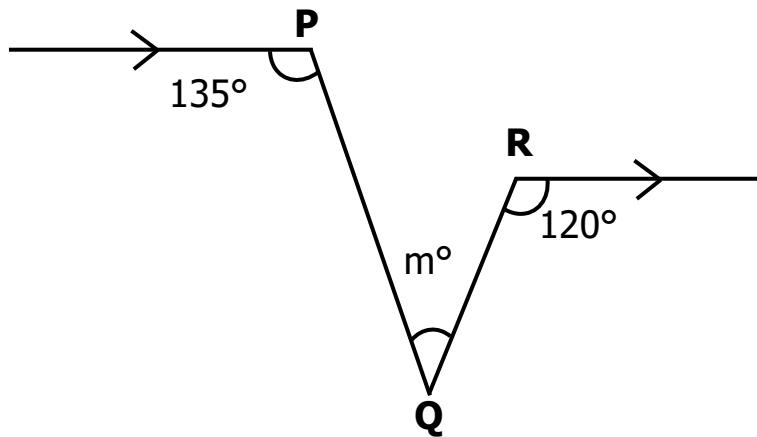
14. Find the multiplicative inverse of  $\frac{3}{7}$

15. Work out: **4949 ÷ 7**

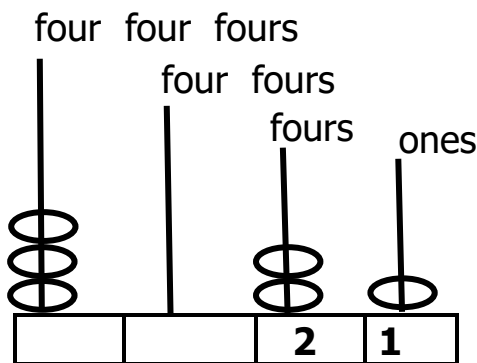
16. Yamal climbed 7 steps from his flat upwards and later descended 4 steps to the ground floor. What was Yamal's final position?



17. Study the figure below carefully and answer question that follow:  
Find the size of angle **PQR** in degrees.



18. Complete the abacus below and find the value of 3 in the number given.



19. The ratio of the mass of two girls Joselin and Aisha is 2:5.  
If Joselin weighs 45kg less than Aisha, Workout their total mass.
20. A ten-month-old baby was crawling on the sitting room floor, moving 0.5 millimeters every second, and covered a total distance of 10 metres.  
How long did the baby take to for this exercise?



**Turn Over**

## SECTION B: 60 MARKS

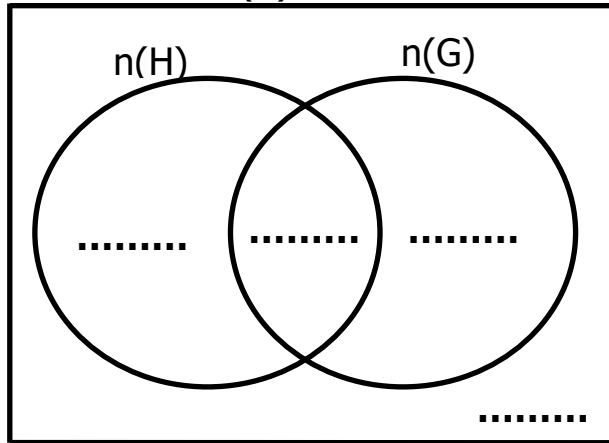
Answer all questions in this section.

Marks for each question is indicated in brackets.

21. Given that  $n(\mathbf{G})' = 13$ ,  $n(\mathbf{H})' = 10$ ,  $n(\mathbf{G} \cup \mathbf{H}) = 17$  and  $n(\Sigma) = 25$ .  
Use the above information to complete the Venn diagram below.

$$n(\Sigma) = 25$$

(04 marks)



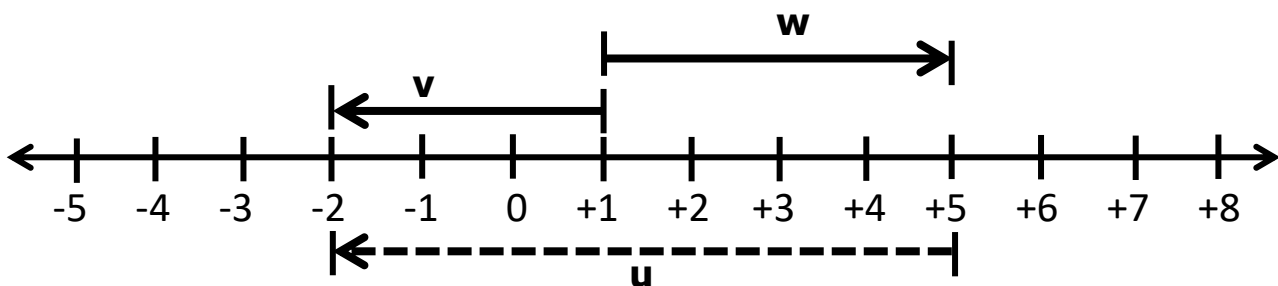
Find;

(i)  $n(\mathbf{G} \cap \mathbf{H})'$

(ii)  $n(\mathbf{H} - \mathbf{G})'$

(01 mark)

22. Study the number line below carefully and answer questions that follow.



- (a) Write the mathematical statement shown on the above number line.

(02 mark)

- (b) Find the additive inverse of the integer represented by letter  $u$ . (01 mark)

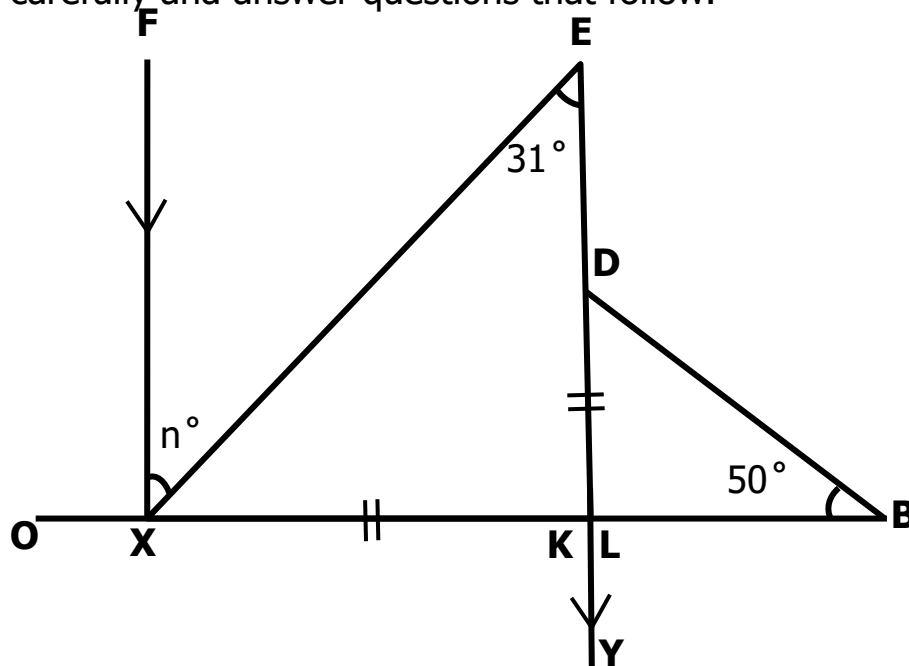
(c) Complete the table below in finite 8.

(02 marks)

+	2	5
3		
4		



23. (a) In the figure below, triangle **DKB** is a scalene triangle. Study it carefully and answer questions that follow.



Find the size of;

(i) angle **EDB**

(02 marks)

(ii) angle **BKY**

(02 marks)

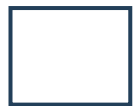
(iii) angle **EXO**

(02 marks)

24. The District Agriculture Ministry organized a massive animal dosing exercise to fight against a disease outbreak. During a one-week survey in a certain district, **2,492 goats** and **1,512 cows** were each given liquid substance every day for seven days.

(a) Without dividing, show your working and find out which group of animals did not complete the full dose for the week. *(04 marks)*

(b) Find the sum of the least and the next algebraic expressions shown in the sequence below:  
 **$p, p + q, p + 2q, p + 3q, \dots$**  *(02 marks)*



25. Epodoi bought some books at sh. 50000 and later sold them at a loss of 25%.

(a) How much did she sell the books? *(02 marks)*

(b) If Oto gave her the percentage loss as the profit made, How much money would he have paid for the books? *(02 marks)*



26. Soroti Town Clerk spent his December salary of last year as follows:  
 $\frac{1}{6}$  on rent,  $\frac{1}{4}$  on food,  $\frac{1}{3}$  on transport,  $\frac{1}{2}$  of the remainder on fees and saved the rest.

(a) Find the fraction he saved. (04 marks)

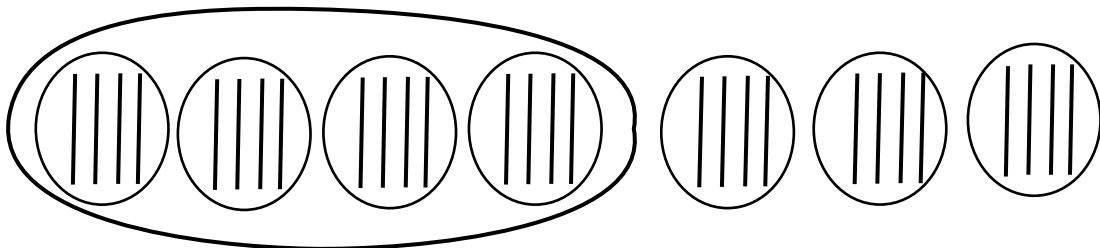
(b) If two thirds of sh. 900,000 was spent on transport,  
 How much money did he spend on food? (02 marks)



27. (a) Solve for h;  $\frac{1}{3}$  of h  $\div$  ( $1\frac{1}{3}$  of 1) = 1. (02 marks)

(b) Find the value of m where  $m = g$ :  
 $g^2 + g^2 = 112_{\text{five}}$ . (03 marks)

28. Below is a base number. Study the illustration below and answer questions that follow.



(a) Write the base four numeral above. (02 marks)

(b) Express the above numeral to denary base.

(02 marks)



29. Dr. Fabiolah from Rwanda went to USA with her two sons and a daughter for the holiday of two days only. They travelled and arrived on Friday at **a quarter to 12:00** midnight and spent two full nights at Ibrahimovic's hotel for accommodation, feeding and other facilitations up to Sunday at **11:45 a.m.**

(a) Use the information given and complete the table below carefully.

(04 marks)

1 US Dollar (USD) = Ug. Sh. 3,600

1 Kenyan Shilling (K.Sh) = Ug. Sh. 1,200

1 Pound Sterling (GBP) = Ug. Sh. 4,850

ITEM	QUANTITY	UNIT COST	AMOUNT
Meals	4 plates		Ug.sh. 403200
Drinks	5 bottles		Ug.sh. 360000
Rooms		£16	Ug.sh. 441600
Games	1 game	US\$ 20	

- (b) Find the total amount he spent in two days if he played only during day time at 4:00 p.m. (02 marks)

30. Apio constructed a kraal at his home in a rectangular shape. Using only a ruler, a pencil and a pair of compasses, show how she constructed the kraal with accurate ground measurements of 7 metres long and 5 metres wide.

(a) Use a scale of **1m = 1cm** to construct the above structure in the space provided below. (04 marks)



(b) Find the area of the kraal in meters.

(01 mark)

31. In the grid below, use ordered pairs of coordinates given to plot a quadrilateral figure.

**X** (4, +2), **Y** (4, -1), **V** (-3, -1), **W** (-1, +2).

( 04 marks)

