



KURASA PROBLEM SOLVERS LEAGUE
School Based Assessment
Grade 8 Term 3 2025
Mathematics
Time: 2 Hours

Learner Name : _____

Workspace Code : _____

Instructions to the learner

1. Write your **name** and **assessment number** in the spaces provided above.
2. Write the **name** and **code of your school** in the spaces provided above.
3. Sign and write the **date** of the assessment in the spaces provided above.
4. This question paper consists of **two sections: A and B**.
5. Answer **all the questions** in section A on the **separate Answer Sheet** provided.
 - Shade the correct option (A, B, C, or D) for each question.
6. Answer **all the questions** in section B in the spaces provided in this Question Paper.
7. Show all the workings in section B in the spaces provided.
8. **Non-programmable calculators** may be used, except where stated otherwise.
9. Give non-exact numerical answers correct to **3 significant figures**, and one decimal place for angles in degrees, unless otherwise specified in the question.
10. For π , use either the calculator value or **3.142**.
11. Do **not** remove any page from this question paper.
12. Answer **all the questions in English**.

For teacher's use only.

Learner's Score	
Total Score (100 Marks)	
Performance Level	

© The Kurasa Problem Solvers League 2025

SECTION A (10 Marks)

1. The total number of patients in a certain hospital in Nairobi County was recorded as **9,865,107**. How many times is the value of digit 8 more than the value of digit 5 in the number of patients?

- A. 5000 B. 160
C. 800,000 D. 795,000

2. A shopkeeper packed 70 kilograms of sugar into $\frac{1}{2}$ kg packets. How many packets did the shopkeeper obtain?

- A. 140 B. 35
C. $70 \frac{1}{2}$ D. $69 \frac{1}{2}$

3. A road was drawn using a scale 1 cm represents 20.5 km. What is this scale written in ratio form?

- A. 1:2050000 B. 1:20500
C. 1:205000 D. 1:20500000

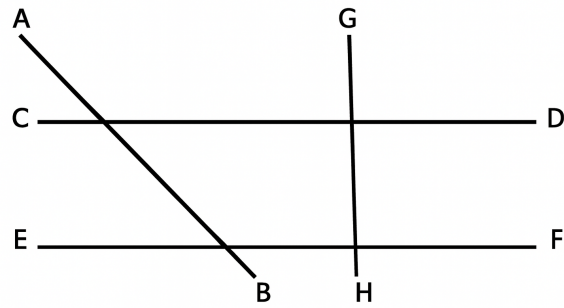
4. The table below was used by grade 8 to generate values for the below linear equation. Find the value of the missing numbers.

$$2x + y = 24$$

x	5	
y		10

- A. x y
 14 7
B. 7 14
C. 5 7
D. 10 14

5. The diagram below shows parallel and perpendicular lines.



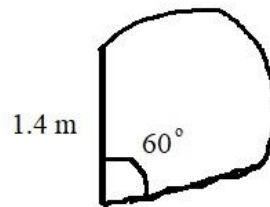
Which of the above lines is perpendicular to line EF?

- A. Line CD B. Line GH
C. Line EF D. Line AB

6. Blessing bought a piece of land valued at sh. 876,000. If the piece of land appreciated at 5% every year. What was the cost of the land after 2 years?

- A. 965790 B. 89790
C. 965970 D. 919,800

7. The diagram below shows an area that a cow grazed on



Which of the following is the correct area the cow grazed on? (Pie=3.14) write your answer correct to 2 decimal places.

- A. 1.0 B. 1.02
C. 1.025 D. 1.03

8. A painter made a ladder which was 7.5m long. He placed the foot of the ladder 6m away from the wall. The top of the ladder touched the base of the window. How high was the base of the window from the ground?

- A. 13.5 B. 4.5
C. 1.5 D. 8.1

18. The actual length and width of a rectangular piece of land are **60m** and **40m** respectively.

a) Which scale can be used to draw the piece of land? (1mk)

b) Make a scale drawing of the piece of land. (3mks)

19. The length of one piece of a timber is $12\frac{2}{5}$ metres. What is the total length of **52** such timbers? (2mks)

20. A school tank is cylindrical in shape. If it has a diameter of 4.2 m and a height of 6m. Find its capacity in litres when three quarter full of water.

(3mks)

21. A customer visited supermarket and bought the following items: (3mks)

a) 4-matchboxes @ sh 7

b) 3-2kg packet of flour @ sh. 170

c) 5kg of sugar @ sh. 200

d) 4-500 litres packet of milk for sh. 210.

Prepare her total bill

22. Baraka had **8.52** metres of a string. He cut it into equal pieces of **0.4** metres. How many pieces of the string did he get? (2mks)

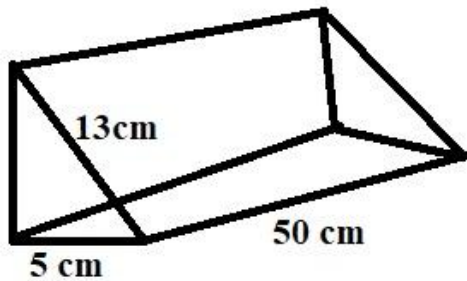
23. A teacher displayed the following numbers during Mathematics lesson.

17 and 47

What is the sum of the squares of the above numbers? (2mks)

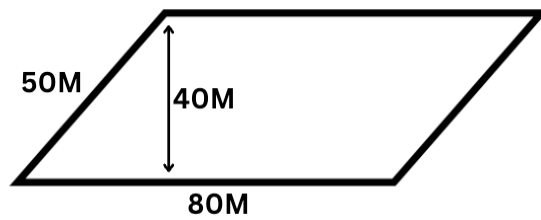
24. The perimeter of a rectangle is 40 cm. if the width is x cm and the length is 7cm longer than the width. Write an equation that can be used to find the perimeter of the rectangle. (2mks)

25. The diagram below shows a wedge. Find its surface area. (3mks)



26. The initial temperature of a substance was 9 degrees Celsius. If the temperature rose by 26 degrees after heating. What was the final temperature of the substance in Kelvin? (2mks)

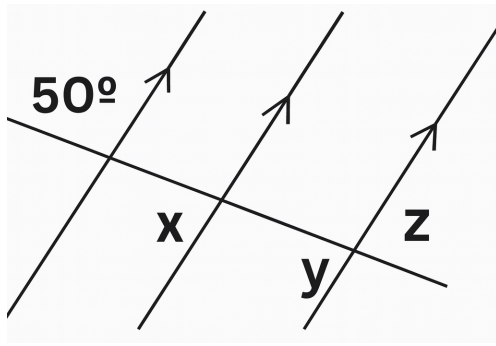
27. A field is in the shape of parallelogram shown below. Find its area.



28. The teacher displayed the number below during group discussion. Work it out. (2mks)

$$\frac{3}{5} \times \left(\frac{5}{6} \times \frac{2}{3} \right) \div \frac{5}{12}$$

29. Study the diagram below and find the angle marked with letters. (3mks)



30. Jama used 0.25 of his salary on food, 0.15 on rent and 0.4 of the remainder on fees and saved the rest. Calculate how much he saved leaving your answer in decimal form. (3mks)

31. The length of a square piece of land is 138m. Use Mathematical table to find the area of the land. (2mks)

32. Grade 8 came across a flash card displaying the following expression. Simplify the algebraic expression. (2mks)

$$\frac{x + y}{3} + \frac{2x - y}{7}$$

33. Using a pair of compasses and a ruler only, construct a circle of diameter 7cm. (2mks)

34. Find the perimeter of a sector of a circle of radius 9 cm and subtends an angle of 100 degrees. (2mks)

35. The equation below was displayed during mathematics lessons. Use elimination method to find the value of x and y . (2mks)

$$x - 2y = 5$$

$$2x + y = 10$$

36. An athlete covered a distance of 76 Decametres and 45 decimetres on a certain day. What is the total distance he covered in decimeters? (2mks)

37. A saleslady is 5% commission on goods sold above 20,000. In a certain she sold goods worth sh. 90,000. How much commission did he receive that month? (2mks)

38. The price of a pen is sh. P. if the price of the pen is more than 7 and less or equal to 13.
a. Form a compound inequality for the above information (2mks)

b. Illustrate the compound inequality on a number line. (1mk)

39. Using a pair of compasses and a ruler only, construct an equilateral triangle of sides 7cm. (2mks)

40. The ratio of cows to goats to sheep is **2:3:5**, If there are **18** goats. What is the sum of cows and sheep? (2mks)

41. Ten people can paint a house for 16 days. How many more people will be required to pain the house for 2 days? (2mks)

42. The table below shows the price of beans in a certain shop.

Mass in kilogram	1	2	3	4
Cost in shillings	60	120	180	240

By using a scale of **1cm represents sh. 30**, draw a line graph to represent the above information.
(4mks)

