

SCHOOL BASED ASSESSMENT
GRADE 8
MATHEMATICS
October - 2026
Time: 1hour 30minutes



THE KENYA NATIONAL EXAMINATIONS COUNCIL
SCHOOL BASED ASSESSMENT
MATHEMATICS

For Regular learners, learners with Physical Impairment and Hearing Impairment)

Learner's Name: _____

Assessment No. _____

Date: _____

Instructions to the learner

1. This paper consists of **20** questions.
2. Answer **all** the questions.
3. Show all the working in the spaces provided below each question.

FOR TEACHER S USE ONLY

Question Number	1	2	3	4	5	6	7	8	9	10
Maximum score	2	2	3	2	3	2	2	2	2	3
Learner's score										

Question Number	11	12	13	14	15	16	17	18	19	20
Maximum score	3	4	3	3	1	3	1	4	3	2
Learner's score										

This paper consists of 10 printed pages.

Answer ALL the questions in the spaces provided.

1. The length of an electric pole is 11 meters. It was erected on the ground 2 meters deep. Using a number line, determine the length of the part of the pole that was above the ground.
(2marks)

2. During community service, learners were tasked to collect waste and put it in a bag. In the first hour, they collected $\frac{3}{5}$ of the bag. In the second hour, they collected $\frac{1}{10}$ of the bag. They later sorted the waste and realized that $\frac{1}{2}$ of the collected waste was plastic. Determine the fraction of the waste collected that was plastic.
(2marks)

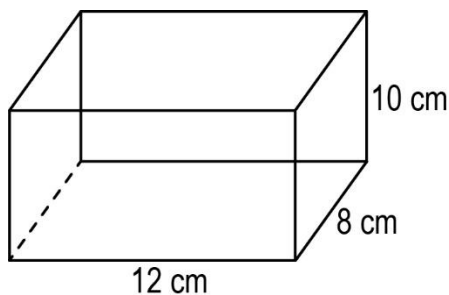
3. During a mathematics lesson, Grace worked out a question and got the answer as **1.81**. Convert this answer into a fraction.
(3 marks)

4. John designed a sketch of a square courtyard for relaxation. The area of the sketch was 0.1948 m^2 . Using mathematical table, determine the length of one side of the sketch.
(2 marks)
5. In a local electronic shop, the price of a torch was Ksh. 1 500. During a promotion period, the shop reduced the price of the torch to Ksh. 1 350. Calculate the percentage decrease in the price of the torch.
(3 marks)
6. In Mapatano school, the total number of Grade 8 learners in Term 1 2025 was 40. The class population increased in Term 2 in the ratio 5:4. Calculate the new class population. (2 marks)
7. Karimi planted vegetables in her rectangular garden. The length of the garden is represented by the expression $(2x + 10) \text{ m}$ and the width $(3x - 2) \text{ m}$. Given that the value of x is 3, determine the perimeter of the garden.
(2 marks)

8. A welder cut two different rods for a construction project. He labelled the rods as A and B. The length of rod A was x cm and that of B was y cm. He joined 3 rods of A and 2 rods of B to get a length of 180 cm. He also joined 2 rods of A and 3 rods of B to get a length of 165 cm. Determine the length of rod B using elimination method. (2 marks)

9. During a math's lesson, a learner drew a circle whose circumference was 44 cm. What was the radius of the circle. (2 marks)

10. Grade 8 learners modeled an open pen holder for their class teacher. The model was in the shape of a cuboid as shown below.

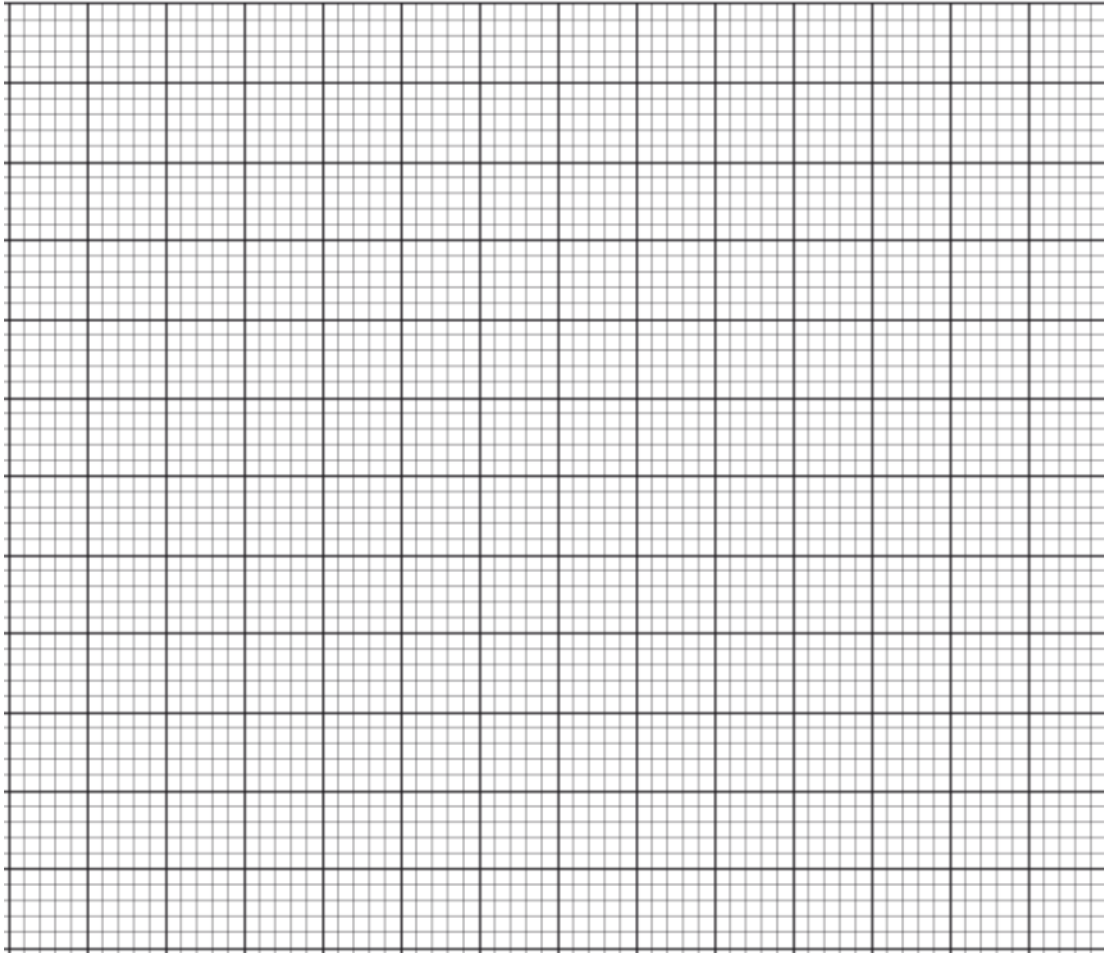


Determine the surface area of the pen holder

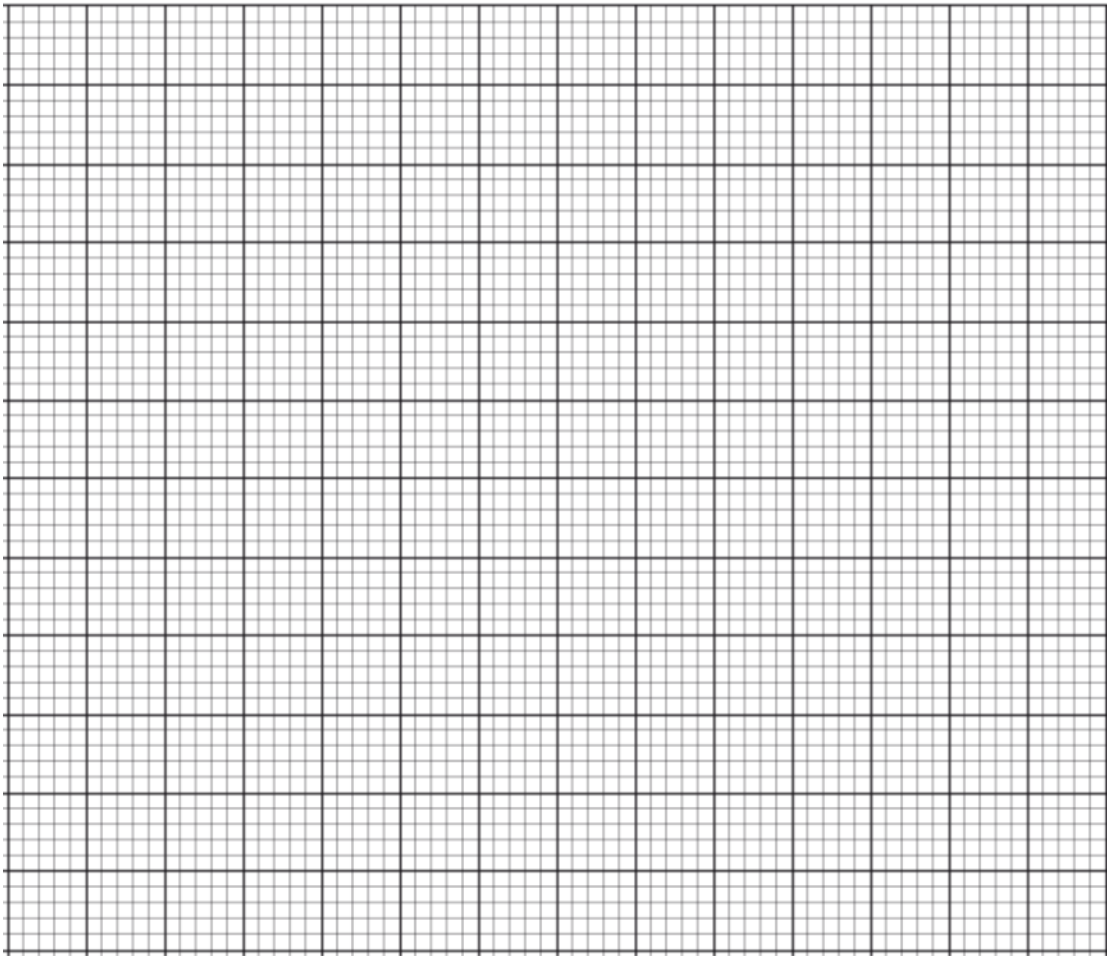
(3 marks)

11. Otieno bought a piece of land in a certain town at the cost of Ksh. 500 000. The appreciation rate of land in this town was 15%. Determine the value of this piece of land after 2 years. (3 marks)
12. During a geometrical construction lesson, the teacher instructed the learners to use a ruler and a pair of compasses only for construction. They constructed triangle JKL such that $JK = 8\text{cm}$, $KL = 6\text{ cm}$ and $JL = 5\text{ cm}$. Using the constructed triangle JKL, construct a circle passing through points J, K, L. measure the diameter of the circle. (4 marks)

13. The distance between the Chief's office and the dispensary in a certain location is represented by the equation $y = 4x - 2$. On the grid provided, draw a graph to represent the distance. (3 marks)

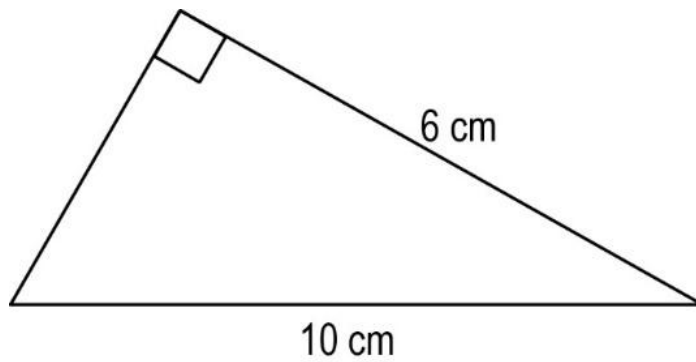


14. Musyoki and Lucy went shopping for school items. They purchased items represented by the equations $3x + 4y = 150$ and $2x + 5y = 170$ respectively. Represent these equations on a cartesian plane and write the coordinate of point of intersection. (3 marks)



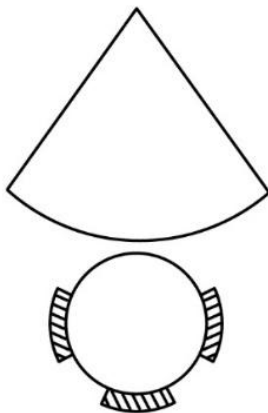
15. The actual length of a certain road is 8.4 km. The length of the road was represented on a map as 4.2 cm. Determine the scale used to draw the road on the map. (1 mark)

16. The swimming pool at a certain resort is triangular as shown below.



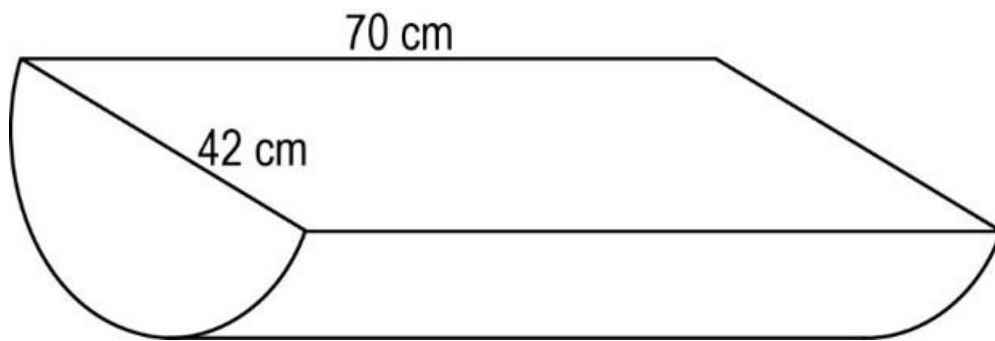
It is drawn using the scale 1:250. Calculate the actual area of the swimming pool in hectares. (3 marks)

17. An artist cut a manilla paper into pieces as shown.



He used the pieces to form a certain solid. Name the solid he formed. (1 mark)

18. A farmer made a water trough for his animals from a cylindrical container. The figure below shows the water trough made.



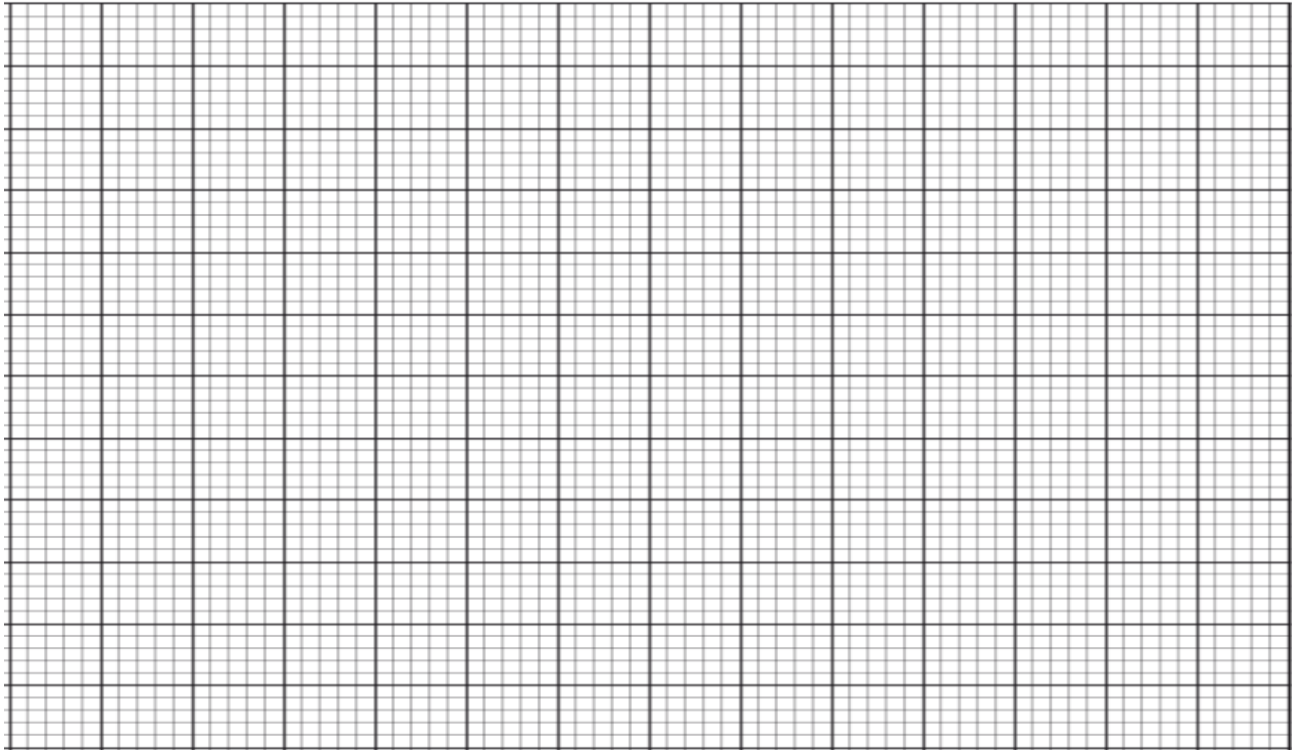
Determine the surface area of the water trough.

(4 marks)

19. Grade 8 learners indicated their favorite learning areas during an academic clinic. The results were as follows:

Learning area	Math's	English	Kiswahili	Agriculture & Nutrition	Social studies	CRE
Number of learners	6	4	2	3	5	2

- a) Draw a bar graph to represent this data. (2 marks)



- b) State the modal learning area (1 mark)

20. The Kamau has different containers of paint. It is 3 green, 2 red and 1 blue. He picks a container randomly to color his artwork. Determine the probability of picking a red paint container. (2 marks)

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