THE KENYA NATIONAL EXAMINATIONS COUNCIL

SCHOOL BASED ASSESSMENT

MATHEMATICS

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

Learner's Name: _____

Assessment No. _____ **Grade:** _____

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	2	3	2	2	2	3
Learner's score										

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

This paper consists of 10 printed pages.

Answer ALL the questions in the spaces provided.

1. The temperature in a certain city was -3° C in the early morning. Later in the day, the temperature was 9°C. Determine the change in temperature.

    (2 marks)

2. John applied fertilizer on his farm. He used $\frac{1}{5}$ of the fertilizer on tomatoes, $\frac{1}{2}$ of the remainder on cabbages and the rest on maize. What fraction of the fertilizer was used on maize?

    (2 marks)

3. An engineer measured the length of a piece of cable as $0.\dot{3}\dot{6}$. Convert the length into a fraction.

    (3 marks)

4.   The area of a square garden is 42.57 m². Using Mathematical tables, find the length of one side of the square.   (2 marks)

5.   A mason made a mixture of sand and cement for construction of a building. The amount of sand used was $\frac{2}{3}$ of the mixture. Determine the ratio of sand to cement in the mixture.

                                                                                                                               (2 marks)

6.   Makau sold 20 litres of milk on Monday. On Tuesday, he sold 16 litres of milk. Calculate the percentage decrease in the amount of milk sold on Tuesday.   (3 marks)

7.   In an experiment, the relationship between three quantities m, c and d was given as

$m = \dfrac{c^2 + 3d}{4}$. Work out the value of m when c = 8 and d = 4.

(2 marks)

8.   Lucy bought 4 exercise books and 8 pens for sh 600. Joy bought 2 similar exercise books and 6 similar pens for sh 350 from the same shop. Calculate the cost of a pen.
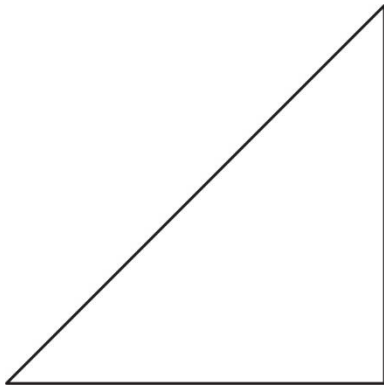
(2 marks)

9.   The minute hand of a wall clock is 14cm long. It moved though an angle of 30°. Calculate the distance covered by the tip of the minute hand to one decimal place.   (2 marks)

10.   Tom had a cylindrical flower vase of radius 28 cm and height 80 cm. He painted the outer part of the flower vase. Calculate the area of the surfaces painted.   (3 marks)
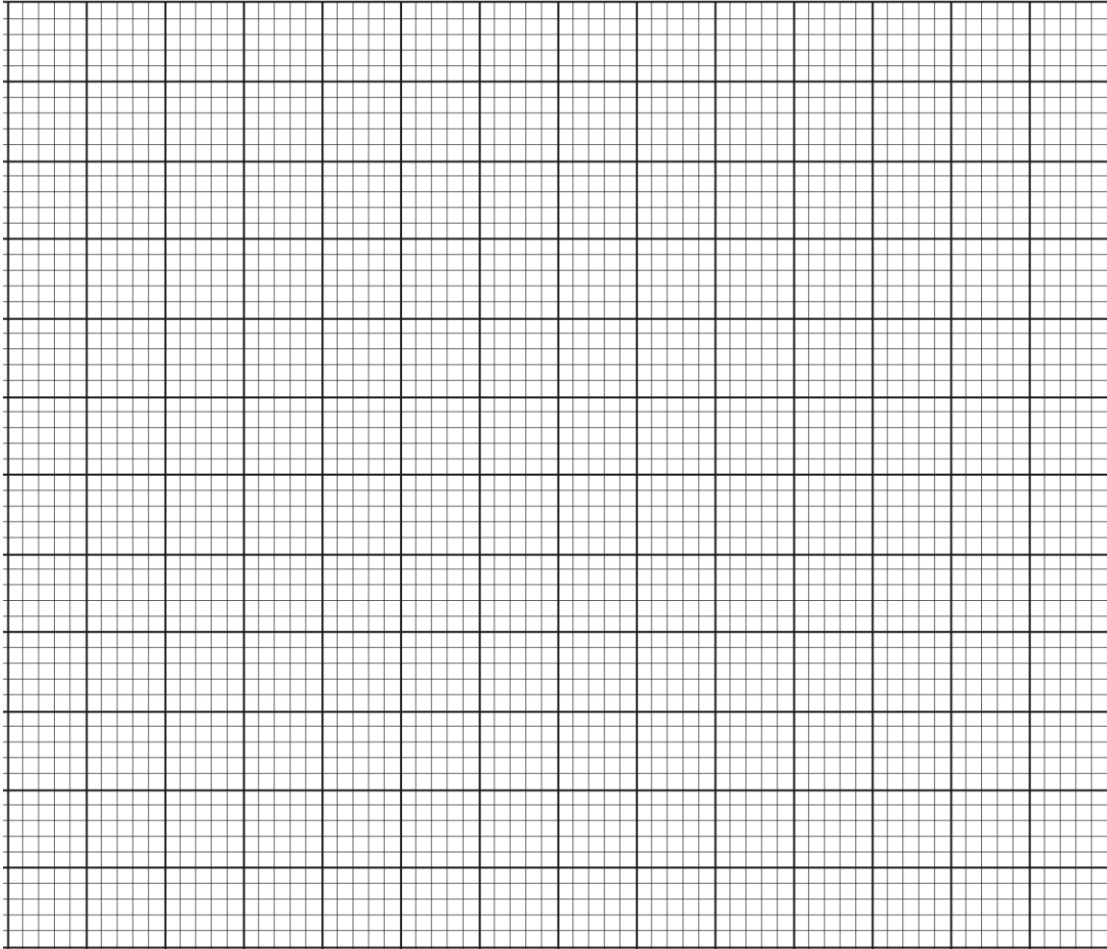
11. Carson deposited sh 50 000 in a fixed deposit account in a bank. The bank gave a compound interest at a rate of 8% per annum. Calculate the amount of money Carson had with the bank at the end 2 years. (3 marks)

12. A carpenter made a tabletop in the shape of a regular polygon. The sum of the interior angles of the polygon was 540°. Calculate the number of sides of the tabletop.

(2 marks)

13. A company designed tiles using triangles and circles to make a pattern. The circle passed though the vertices of the triangle. The triangle below shows part of the pattern.

(a) Construct the circle to complete the pattern. (3 marks)

(b) Measure the radius of the circle. (1 mark)

14. James drew a cartesian plane on his tabletop and placed a pencil at point P (5, 4) and an eraser at point E (-2, 3) On the grid below, graph the location of the pencil and eraser.
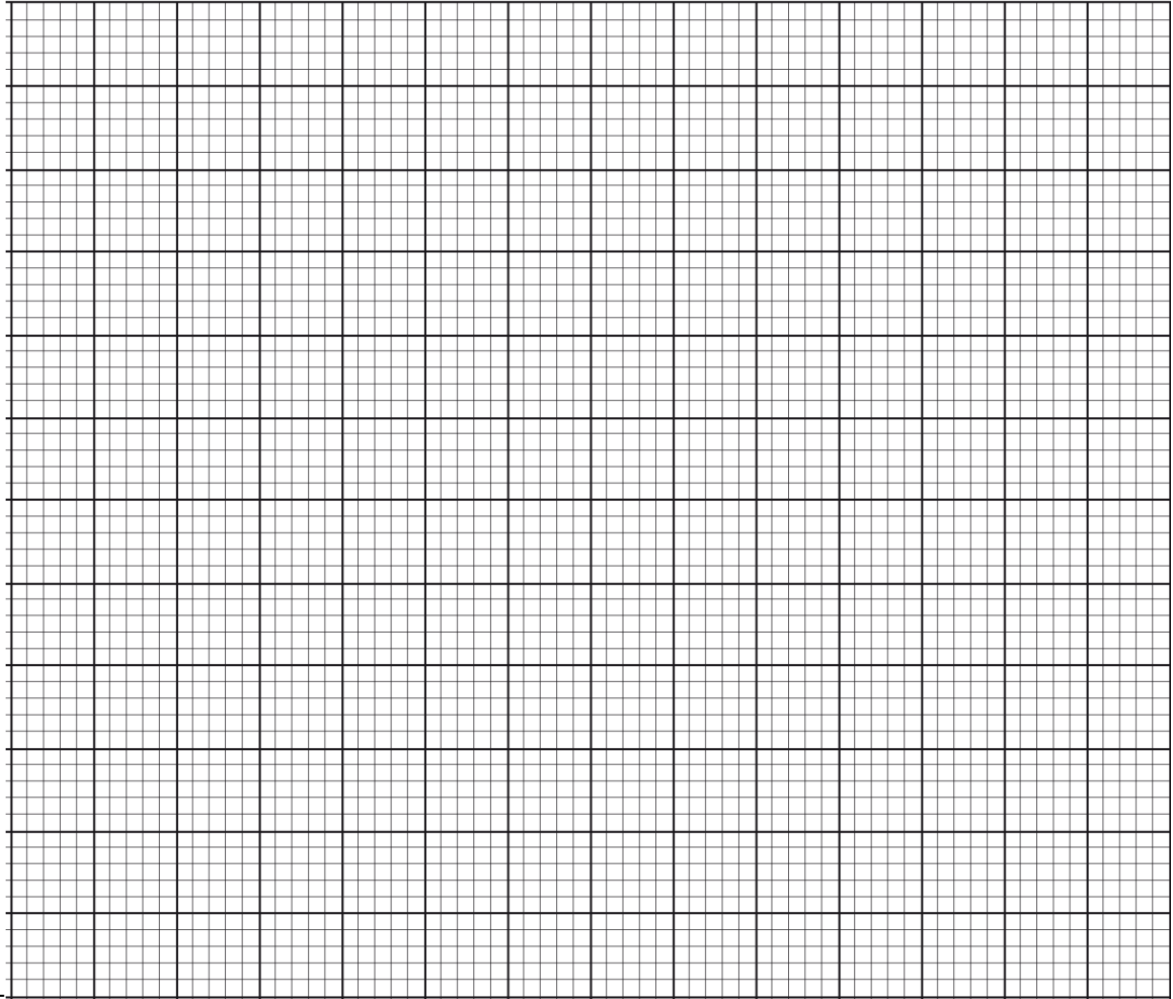
(2 marks)

15. In Hitimu Junior School, the total number of learners in Grade 7 is 50. The number of boys is x and the number of girls is y. In Grade 8, the number of boys is twice the number of boys in Grade 7 and the number girls is same as those in Grade 7. The total number of learners in Grade 8 is 70. The information above was represented by the as.

$$x + y = 50$$
$$2x + y = 70$$

(a) On then grid provided, draw the lines representing the equations. (2 marks)

(b) Find the number of boys and number of girls in grade 7. (2 marks)

16.   A town planner drew the map of a market using the linear scale shown below.

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0                                    5 km
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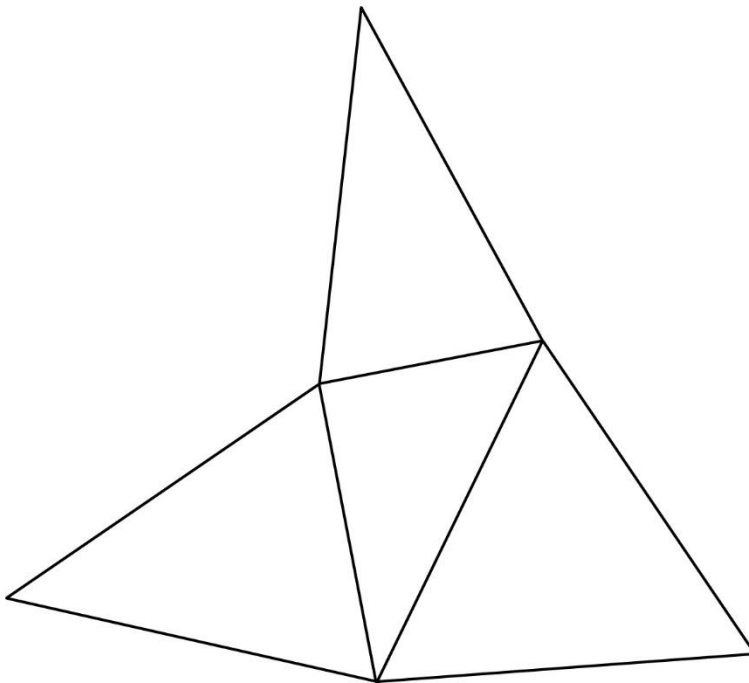   Write the scale used in statement form.   (2 marks)

17.   The scale used in a design of a building was 1:50. The height of the building on the design is
       10cm. Determine the height of the building.   (2 marks)
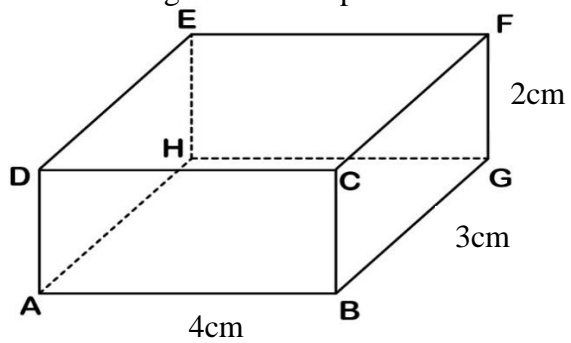
18.   Diana drew the net of a solid as shown below.

       Name the solid represented by the net.   (1 mark)

19. A model of a toolbox in the shape of a cuboid. The dimensions of the model are 4 cm by 3 cm by 2 cm. The figure below represents the model.

(a) Draw a net of the model. (2 marks)

(b) Use the net to determine the length DF (2 marks)

20. A Grade 8 learner, in a certain town, recorded the temperature at different time of the day as show in the table below.

Time of day	8.00 a.m.	10.00 a.m.	12 noon	2.00 p.m.	4.00 p.m.
Temperature	29°C	31°C	32°C	x	34°C

The mean temperature of the day was 32°C. Determine the temperature recorded at 2.00 p.m.

(3 marks)

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