SCHOOL BASED ASSESSMENT
GRADE 7
MATHEMATICS
October 2024
Time: 1hour 30minutes

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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	**1**	**2**	**3**	**2**	**3**	**2**	**2**	**2**	**2**	**2**
Learner's score										

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

This paper consists of 8 printed pages.

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Answer ALL the questions in the spaces provided.

1. A school received Ksh 2 045 372 from the national government. Write the amount of money the school received in words. (1 mark)

2. Lifts in a building are programmed to stop on different floors. One lift stops on the 2^{nd}, 4^{th}, 7^{th}, 8^{th}, 9^{th}, 10^{th} and 11^{th} floors. Identify the floors that are represented by prime numbers. (2 marks)

3. A farmer packs oranges using two types of cartons. One type can hold 15 oranges while the other can hold 18 oranges. Calculate the least number of oranges that can be packed in an exact number of cartons. (3 marks)

4. A learner reads an equal number of pages of a book everyday. After four days, the learner had read $\frac{3}{4}$ of the book. Determine the fraction of the book that the learner reads in one day. (2 marks)

5. In a laboratory, a technician measured the mass of a substance and recorded it as 3.489g. What is the difference between the total value of digit 4 and digit 8 in the recorded mass? (3 marks)

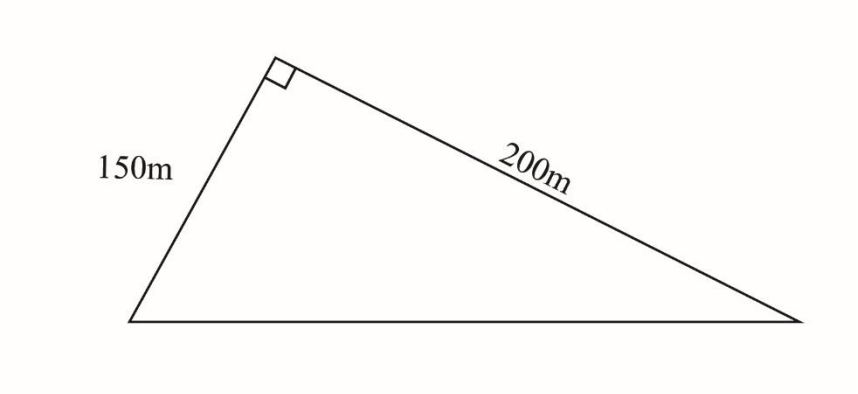
6. An event organiser arranged 324 chairs in equal numbers of rows and columns. Work out the number of chairs that were in each row. (2 marks)

7. In a forest, the number of cypress trees were *c* and the number of pine trees were *p*. The forestry department increased the number of trees by planting twice the number of cypress trees and half the number of pine trees. Write a simplified expression to represent the new number of trees in the forest. (2 marks)

8. Amina bought some books. Ali bought 6 more books than Amina. They bought a total of 24 books altogether. Determine the number of books Amina bought.
(2 marks)

9. Akinyi and Nzomo estimated their heights. Akinyi indicated that her height was greater than 1.2m while Nzomo indicated that his height was less or equal to 1.5m. Write inequality statements to represent the heights of Akinyi and Nzomo. (2 marks)

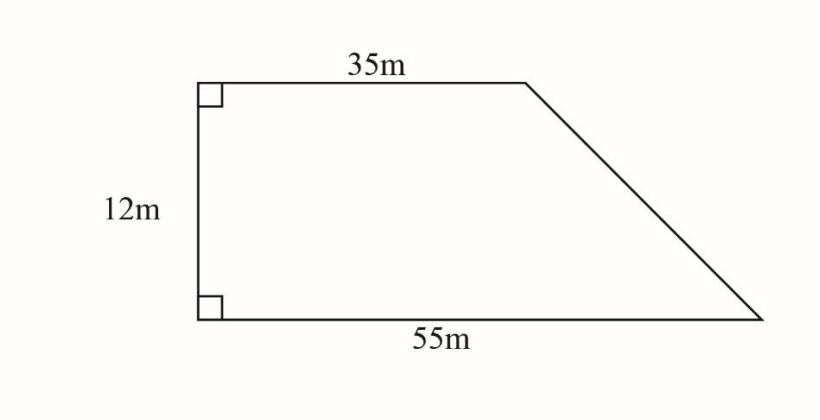
10. Chebet's piece of land is in the shape of a right angled triangle as shown below. The lengths of the two shorter sides are 150 m and 200 m.



Work out the length of the longest side of the piece of land. (2 marks)

11. Olekula was riding a bicycle. The radius of the wheel of the bicycle is 28cm. Calculate the distance he covers when the wheel makes 100 complete revolutions. (Take $\pi = \frac{22}{7}$) (3 marks)

12. Mwala set aside a portion of his land in the shape of a trapezium for grazing his cows. The figure below represents the portion of the land.



A circular water pond of radius 5m was constructed in middle of the portion. Calculate the area of the portion of land that the cows graze on.

(3 marks)

13. A company packs juice in rectangular packets measuring 6cm by 10cm by 18cm. Work out the capacity of the packets in litres. (3 marks)

14. The length of a lane in an athletic field is 420m. Kiptoo took 2 minutes to run round the field along the lane. Calculate Kiptoo's average speed in metres per second.

(3 marks)

15. A liquid was heated in a laboratory to a temperature of 355 Kelvin. Convert the temperature of the of the liquid into degrees Celsius. (1 mark)

16. The international air mailing rates were as shown in the table below.

TYPE OF ARTICLE AND MAXIMUM WEIGHT	COUNTRIES WITHIN EAST AFRICAN ZONE	COUNTRIES WITHIN REST OF AFRICA ZONE	COUNTRIES WITHIN EUROPE AND MIDDLE EAST
LETTERS			
Up to 20g	110.00	120.00	140.00
Not over 50g	195.00	215.00	345.00
Not over 100g	340.00	405.00	615.00
Not over 250g	795.00	900.00	1500.00
Not over 350g	1105.00	1275.00	1925.00
Not over 500g	1445.00	1635.00	2480.00
Not over 1kg	2060.00	2345.00	3730.00
Not over 2kg	2710.00	3115.00	4930.00

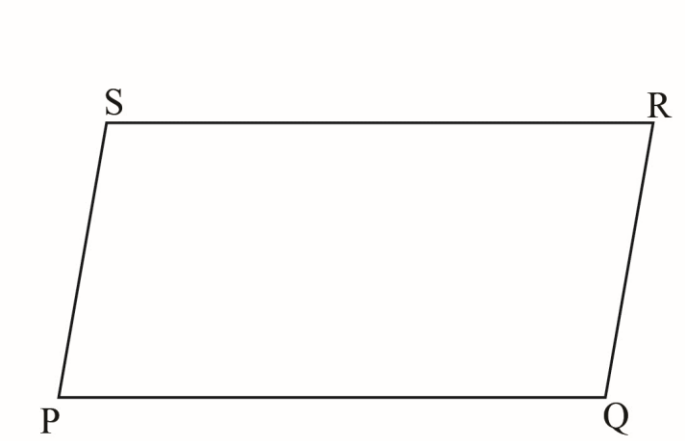
Kelvin posted a letter weighing 300g to Uganda and another weighing 1.5 kg to South Africa. Calculate the total amount of money used to send the two letters.

(3 marks)

17. Wamalwa bought a car worth Ksh 2 300 000 and later sold it for Ksh 1 955 000 Calculate the percentage loss Wamalwa incurred. (3 marks)

18. During an Art and Craft lesson, learners made a board in the shape of a regular polygon. They measured one of the interior angles as 120°. Calculate the number of sides of the board. (3 marks)

19. A solar panel is in the shape of a parallelogram PQRS as shown in the figure below.



Bisect angles SPQ and PSR and let the bisectors meet at T. Measure Angle PTS.

(4 marks)

20. The number of tourists who visited 5 towns in December 2022 were recorded as shown in the table below.

Town	**Number of tourists**
Mombasa	30000
Malindi	25000
Nairobi	60000
Naivasha	50000

Represent this information using a bar graph. (3 marks)

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