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KENYA JUNIOR SCHOOL EDUCATION ASSESSMENT

END TERM I 2025 JOINT EXAM

GRADE 9 - MATHEMATICS - 903

Time: 2 hours

NAME: _____

SCHOOL: _____

STREAM: _____ DATE: _____

INSTRUCTIONS

a) Write your name, school, stream and date in the spaces provided above.
b) Answer **ALL** questions in this booklet.
c) All answers must be given as per the guidelines of the questions.
d) This question paper consists of **TWO** sections: **A** and **B**.
e) Answer **ALL** the questions in section A in the table below.
f) Answer **ALL** the questions in section B by working out in the spaces provided after each question.
g) Show all the workings in section B in the spaces provided.
h) Non-programmable calculators may be used, except where stated otherwise.
i) Give non-exact numerical answers, correct to 3 significant figures and one decimal place for angles in degrees, unless a different level of accuracy is specified in the question.
j) For π, use either the calculator value or 3.142.

ANSWER SHEET - SECTION A

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20

LEARNER'S SCORE

SCORES		TOTAL
A (Out of 20)		
B (Out of 80)		

This paper consists of 12 printed pages. Candidates should check the question paper to confirm that all pages are printed as indicated and that no questions are missing.

SECTION A (20 marks)

Write your answers in the table provided on the first page

WORKING SPACE

1. What is the total value of **2** in:
   435,637 + 97,210
   A. 20000 B. 2000 C. 200 D. 20

2. Calculate:
   (-4) + (-4) + (+10) =
   A. -18 B. 18 C. -2 D. 2

3. Water, at 25°C was put in an icemaker to change into ice cubes. By the end of the day, the temperature of the formed ice was -99°C. Find the temperature change.
   A. -74°C B. 74°C C. -124°C D. 124°C

4. Work out:
   $-6 \times -7 \times -8 =$
   A. -336 B. 336 C. 678 D. -678

5. Work out:
   $-6 \times 9 + 7 - 12 \div 3 - 7$
   A. 43 B. –58 C. –43 D. 58

6. Covert 0.415 into a percentage.
   A. 0.0415% B. 0.415% C. 4.15% D. 41.5%

7. Find the volume of a cubic tank whose length is 8m.
   A. 64 B. 513 C. $64m^3$ D. $513m^3$

8. Using a calculator, find the cube of 3.77. Round of your answer to 2 decimal places.
   A. 14.2129 B. 53.582633 C. 14.21 D. 53.58

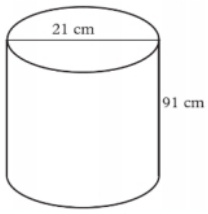
9. The volume of a cubic box is $0.63149cm^3$. Find the length of one side of the box.
   A. 0.858 B. 858 C. 0.0858 D. 0.00858

10. The sides of a cubic box are 8cm. Find the volume of the cube and leave your answer in index form with a base of 2.
    A. $2^{10}\,cm^3$ B. $2^9\,cm^3$ C. $2^8\,cm^3$ D. $2^7\,cm^3$

11. Evaluate: $(3^5)^{2/5}$
    A. 9 B. 27 C. 97.2 D. 243

12. Find the common logarithm of one hundred million.
    A. 9 B. 8 C. 7 D. 6

13. Calculate the surface area of the cylinder below.



A. 2348
B. 6791
C. 6699
D. 1911

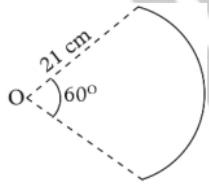
14. The cost of petrol at Shell reduced from sh.200 to sh.180 in March 2025. Calculate the percentage decrease in the price.
A. 10% B. 11.1% C. 90% D. 89.1%

15. The time that Koech took to run a race was $\frac{6}{7}$ of the time that Kipchirchir took. Kipchirchir took 210 seconds. How long did Koech take to run the race?
A. 10s B. 30s C. 180s D. 210s

16. A school driver fueled at a station. He paid sh.19,800 for 110 litres of fuel. How much would he pay if he had fueled 100 litres of fuel?
A. sh.18,000 C. sh.19,900
B. sh.19,700 D. sh.18,500

17. A manufacturing company produces 34,500 bags of cement in five days. Calculate its rate of production.
A. 345 B. 3400 C. 6900 D. 34.5

18. Find the area of the arc below, considering O as the center.



A. 21 cm
B. 22 cm
C. 44 cm
D. 66 cm

19. A learner rolled a dice during a Maths lesson. Find the probability of an even number showing up. Express your answer as a decimal.
A. $\frac{3}{6}$% B. 0.5% C. 1% D. 50%

20. A motorist on the Nairobi Expressway drove a superbike at a speed of 54km/h. Convert the speed into metres per second.
A. 15 m/s C. 54000 m/s
B. 26 m/s D. 26000 m/s

WORKING SPACE

SECTION B (80 marks)

Work out in the spaces provided after each question

21. Solve the following simultaneous equations using the methods shown.

a) Solve by substitution: (5 marks)

$x + 2y = 11$

$2x - 2y = 10$

b) Solve by elimination: (5 marks)

$2b + 3p = 190$

$4b + 2p = 290$

22. Grade 9 learners scored the following marks in a CAT. Study them and answer the questions below.

10, 6, 6, 5, 6, 4, 6, 12, 7, 4, 7, 9, 10, 7, 14, 9, 8, 14, 13, 13

a) How many learners sat for the CAT? (1 mark)

b) What was the highest mark? (½ mark)

c) What was the lowest mark? (½ mark)

d) Calculate the mean of the scores. (2 marks)

e) Find the median. (1 mark)

f) Find the mode. (1 mark)

g) If the CAT was out of 20:

i. Convert the highest mark into a percentage. (2 marks)

ii. Convert the lowest mark into a percentage. (2 marks)

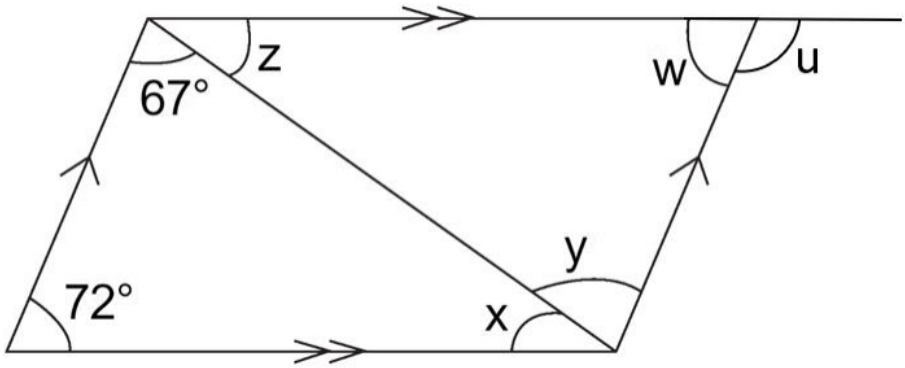
23. A cylindrical oil tank at a petrol station has a radius of 3.5 metres and a height of 15 metres.

a) Calculate the volume of the tank. (4 marks)

b) Convert the volume into litres. (3 marks)

c) How much would it cost to fill the tank if one litre of oil is sh.200? (3 marks)

24. Study the angles in the parallelogram below.



While showing your working, find the value of:

a) Angle **w** (2 marks)

b) Angle **x** (2 marks)

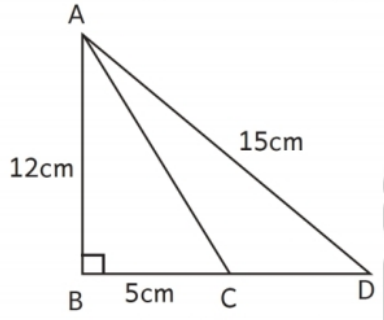
c) Angle **y** (2 marks)

d) Angle **z** (2 marks)

e) Angle **u** (2 marks)

25. Andrew had **y** shillings. He spent 3000 shillings. Arnold has twice what Andrew is left with. Form an algebraic equation for the total amount of money they had. (5 marks)

26. Study the figure below.



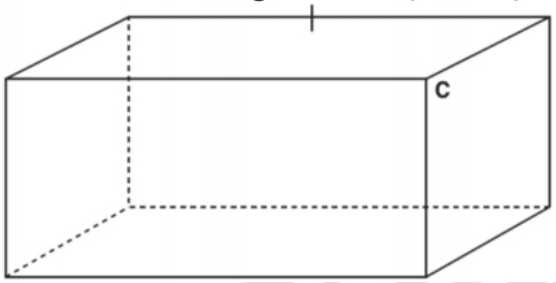
a) Using the Pythagoras theorem to calculate the length of line:

i) AC (2 marks)

ii) CD (2 marks)

b) What is the length of line BD. (1 mark)

27. Draw a net for the figure below. (6 marks)



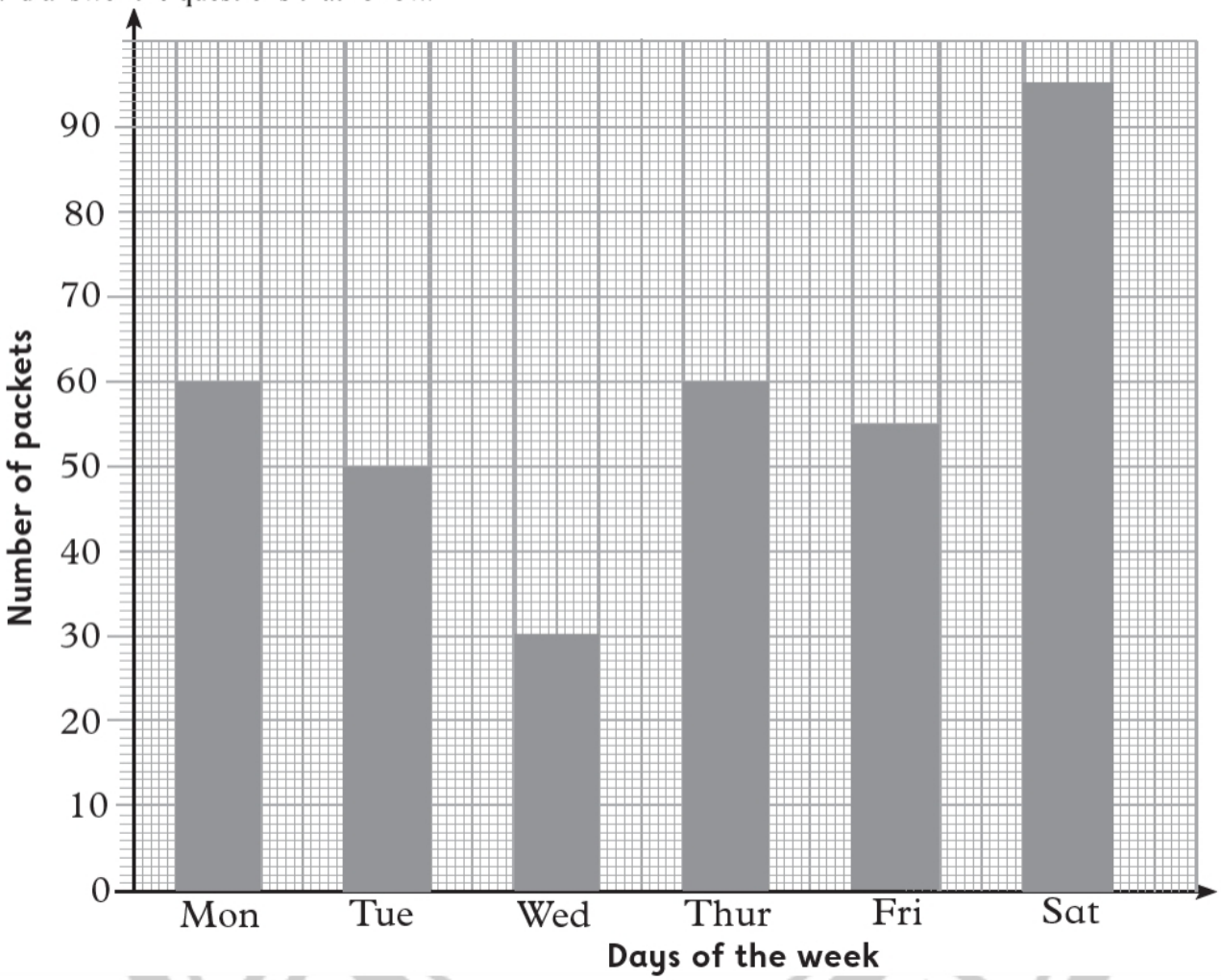
28. Draw line AC=10 cm. Mark point M on the line such that AM=4cm. Construct a perpendicular line to AC through point M. (6 marks)

29. The cash price of a Chromebook is sh.32000. Karima bought it on hire purchase terms. He paid a deposit of sh.18000 by six equal monthly installment of sh.3000.
    a) Calculate the hire purchase price. (4 marks)

    b) How much more did he pay in hire purchase than the cash price. (3 marks)

    c) If he were to pay the remaining money in four equal monthly installments, how much would he pay per month? (3 marks)

30. The bar graph below shows the number of packets of tea leaves sold by a shopkeeper in six days. Study it and answer the questions that follow.



a) Which day did the shopkeeper:

i. record the highest sales. (1 mark)

ii. record the lowest sales. (1 mark)

c) Which days did the shopkeeper sell the same number of packets. (2 marks)

b) What is the difference between the highest and lowest sales? (2 marks)

c) Calculate the total number of packets sold by the shopkeeper during that week. (4 marks)

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