TARGETER WINGS

KENYA JUNIOR SCHOOL EDUCATION ASSESSMENT

GRADE 9 - 2025

Wings 005

MATHEMATICS

TIME:2 hours

Candidate's Name _____	Assessment Number _____
School Name _____	School Code _____
Candidate's Signature _____	Date _____

KJSEA 903
MATHEMATICS

INSTRUCTIONS TO CANDIDATES

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.
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 figure and one decimal place for angles in degrees, unless a different level of accuracy is 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.**

SECTION A (20 marks)

1. You have been given this question paper and a separate answer sheet. Answer **All** the questions in Section A on the separate answer sheet provided.
2. When you have chosen your answer, mark it on the **ANSWER SHEET,** not in this question paper.

HOW TO USE THE ANSWER SHEET

3. Use an ordinary HB pencil.
4. Confirm that the answer sheet you have been provided with has the following:
   - **YOUR ASSESSMENT NUMBER**
   - **YOUR NAME**
   - **NAME OF YOUR SCHOOL**
   - **NAME OF THE SUBJECT**
5. Keep the answer sheet clean, dry and **DO NOT** fold it.
6. For each of the questions **1 – 20,** four answers are given. **The answers** are lettered **A, B, C** and **D.** In each case, only **ONE** of the four answers is correct. Choose the **correct** answer.
7. On the answer sheet, the correct option is to be shown by drawing a **dark line** inside the box in which the letter you have chosen is written.

Example In the Question Booklet:

14. Work out:
-9-(-12)

A. -21 B. 21 C. -3 D. 3

The correct answer is **D.**

8. **On the answer sheet,** in the set of boxes given for number **14,** draw a **dark line** inside the box with the letter D printed in it as indicated below.

14. [A] [B] [C] [D]

9. Your **dark line MUST** be inside the box.10.For each question, **ONLY ONE** box is to be marked in each set of four boxes.

For official use only

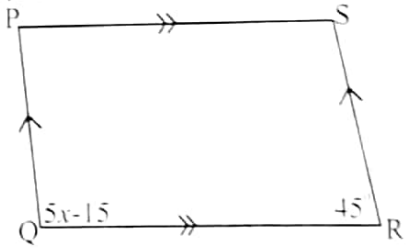
SECTION B (80mks)

Question	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40							
Maximum Score	2	3	5	2	4	4	5	3	3	4	3	4	4	5	3	4	8	4	6	4							
Candidate's Score																											

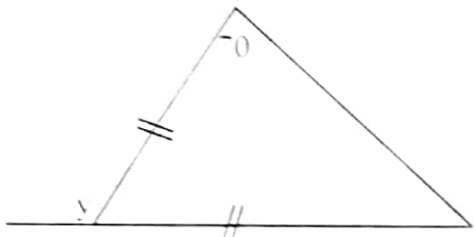
This paper consists of 8 printed pages.
Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.

SECTION A (20mks)

1. What is the total value of digit 9 in the number 0.349?
   A. Ones. B. Tenths.
   C. Thousandths. D. Hundredths
2. What is the possible solution of the question written below?
   (- 16) + 5 - (- 6)
   A. -15 B. - 5
   C. - 17 D. 15
3. Solve for the value of **n**:
   $\frac{1}{3n} = \frac{1}{27}$
   A. 3 B. 9
   C. 5 D. $\frac{-}{9}$
4. Using tables evaluate the following:
   21.69^2
   A. 10.202 B. 10202
   C. 10.204 D. 10204
5. A farmer has 30 animals which are cows, goats and sheep. If the number of goats and sheep is 12 and 7 respectively. Represent the number of cows using tally marks.
   A. 𝍸 𝍸 | B. 𝍸 ||
   C. 𝍸 𝍸 || D. 𝍸 𝍸 |
6. The diagram below shows a parallelogram PQRS. Find the value of angle PQR.



   A. 30° B. 150°
   C. 100°. D. 135°
7. During the animal vaccination exercise, a veterinary doctor used a syringe that has a diameter of 0.082cm. How many significant figures was the diameter?
   A. 2 B. 3
   C. 5 D. 4
8. A wooden cube has a volume of $0.4789cm^3$. What is the length of one side?
   (to 4d.p)
   A. 0.1098 B. 0.1093
   C. 0.7824 D. 0.7823
9. A road that is 2.5km was drawn on a piece of paper. The length of the road drawn measured 5cm. Determine the scale used.
   A. 5: 2.5 B. 1:50,000
   C 1: 0.5. D. 5 2500
10. If 9 men, working for 8 hours a day can dig a drainage pit in 12 days, how long would it take 6 men working 9 hours a day to dig the same drainage pit?
    A 9 days B 13 5 days
    C. 20 days D. 16 days
11. A drop of blood was recorded as 0.000016mm Express the drop of blood in standard form
    A 1.6×10^{5} B. 1.6×10^{5}
    C 1.6×10^{-5} D 1.6×10^{-5}
12. Determine the common logarithm of 100,000
    A. 10 B. 4
    C. 5 D.100,000
13. Nyamisa had visitors and she prepared 20 chapatis. The visitors ate 15 chapatis and left the rest. What ratio represents the number of chapatis eaten by the visitors?
    A. 3:4 B. 1:4
    C. 15:20 D. 1:20
14. A bathroom window is in the shape of a regular polygon. Each of interior angle of the window pane is 108°. Calculate the number of sides of the window pane.
    A.6. B.7
    C. 5. D.4
15. What is the supplementary of the angle marked **Y**?



    A.70° B. 140°
    C.50° D. 40
16. A certain farm measures 20m by 35m. Flowers were planted in the farm leaving a path of 150cm all round the farm. What is the area of the piece of land where the flowers were planted?
    A. $700m^2$ B.1244m
    C. $544m^2$ D.619.75m^2

17. A certain train moves at a speed of 140km/h. What is the speed in m/s?
A. 38.89m/s B.14m/s C. 18m/s D. 36m/s

18. A meeting ended at 1600hrs and lasted 3 hrs 45 minutes. At what time had the meeting begun?
A. 1.00pm B. 12.15pm C.12.55pm D. 1945hrs

19. By selling an item at sh 6000, Omollo made a profit of 20%. How much will he sell the same item to make a profit of 30%?
A. 5000 B. 7800 C. 9000 D. 6500

20. Convert the number 0.00346 correct to four significant figures.
A. 0.346. B. 0.003460. C. 0.00346 D. 3460

SECTION B **(80mks)**

21. Work out: (2 mks)

$$\begin{bmatrix} 7 & 8 & 6 \\ 5 & 4 & 2 \end{bmatrix} - \begin{bmatrix} 6 & 9 & -4 \\ 4 & 7 & -2 \end{bmatrix}$$

22. The top of a tent is in the shape of a cone. It has a height of 3m and a slanting height of 7m. Workout its volume.**(Use π =3.14)** (3mks)

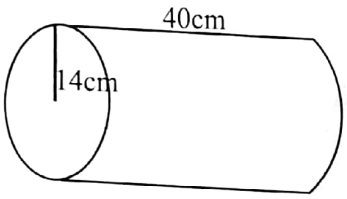
23. The cash price of a refrigerator is sh 50000. Nyambura bought it at cash price and she was given a 20% discount but Ntabo bought it on higher purchase terms. He paid a deposit of sh. 20000 and the remaining amount was paid in 5 months each month sh. 10000.
a) How much did Ntabo pay for the fridge? (2mks)

b) How much more than Nyambura did Ntabo pay? (3mks)

24. A car starts from rest and reaches a velocity of 10m/s after 5 seconds. Determine the acceleration. (2mks)

25. In the kitchen of Busara junior school there are 3 taps. Tap **A** can fill a water tank in 6hrs, tap **B** can fill the same tank in 4hrs while tap **C** can empty the same tank in 8hrs. If all the three taps are opened at the same time. How long will it take for the tank to be full? (4mks)

26. Workout the surface area of the closed cylinder drawn below. (4mks)



27. Construct triangle **XYZ** such that **XY** =9cm, **YZ**=7.5 CM and **XZ**= 10.5 cm. Construct a circle passing through the vertices **XYZ** and measure the diameter. (5mks)

28. Using L.C.M workout: (3mks)

$$\frac{3x+4}{3}+\frac{x+2}{4}$$

29. On the space provided solve the following linear inequality to find the value of **X** and **Y** (3mks)

Y=2x+1

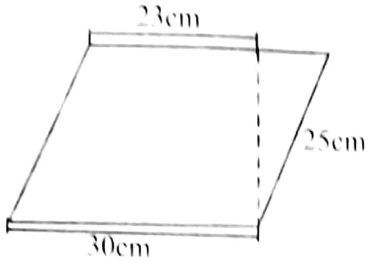
Y=-x+4

30. Solve the following inequality and represent it graphically. (4mks)

$x + 12 \leq 15$

31. Carol covered a distance of 240km in 4 hrs. What was her speed in metres per second? (3mks)

32. The figure below shows a parallogram. Calculate its area. (4mks)

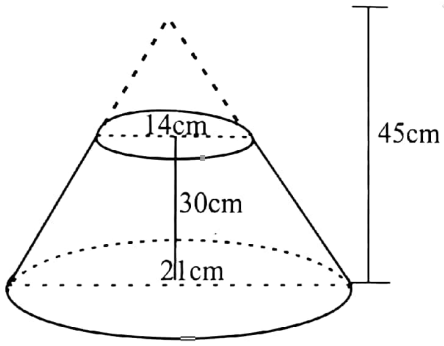


33. A chapati is perfectly round with a radius of 20cm.

a) What is the area of one slice if the chapati is cut into 8 equal slices? (2mks)

b) What is the arc length of each chapati slice? (2mks)

34. Determine the volume of the frustrum of the cone shown below. (5mks)



35. A shoe cost sh.1000 last year. This year it costs 1150.

a) Find the percentage increase. (1mk)

b) If the trend continues, what will be the cost next year? (2mks)

36. A bag has 6 red 4 blue and 2 green marbles.

a) What fraction are red marbles? (1mk)

b) What is the probability of picking a green marble? 1mk)

c) If one red marble is removed, what is the new fraction of red marbles? (2mks)

37. a) Write $\text{Log}_3 81 = 4$ in index form. (2 mks)

b) Use mathematical tables to find:

(i) The logarithm of 0.02963. (3 mks)

(ii) The cube of 39.46 (3 mks)

38. A movie starts at 6:40 pm and ends at 9:15 pm.

a) How long does the whole movie take? (1mk)

b) If there was a 15 minutes break. What is the actual movie length? (1mk)

c) What time in 24 hour clock system will it be 30 minutes after the movie ends? (2mks)

39. Ann purchased a piece of land for ksh. 280000, in 3 years the land appreciated at a rate of 10% per year. Calculate:

a) The price of the land after 3 years. (4 mks)

b) By how much money did the land appreciate in 3 years? (2mks)

40. The figure below shows a square based pyramid. One side of the square is 12cm and the slant height is 13cm. Calculate the total surface area. (4mks)