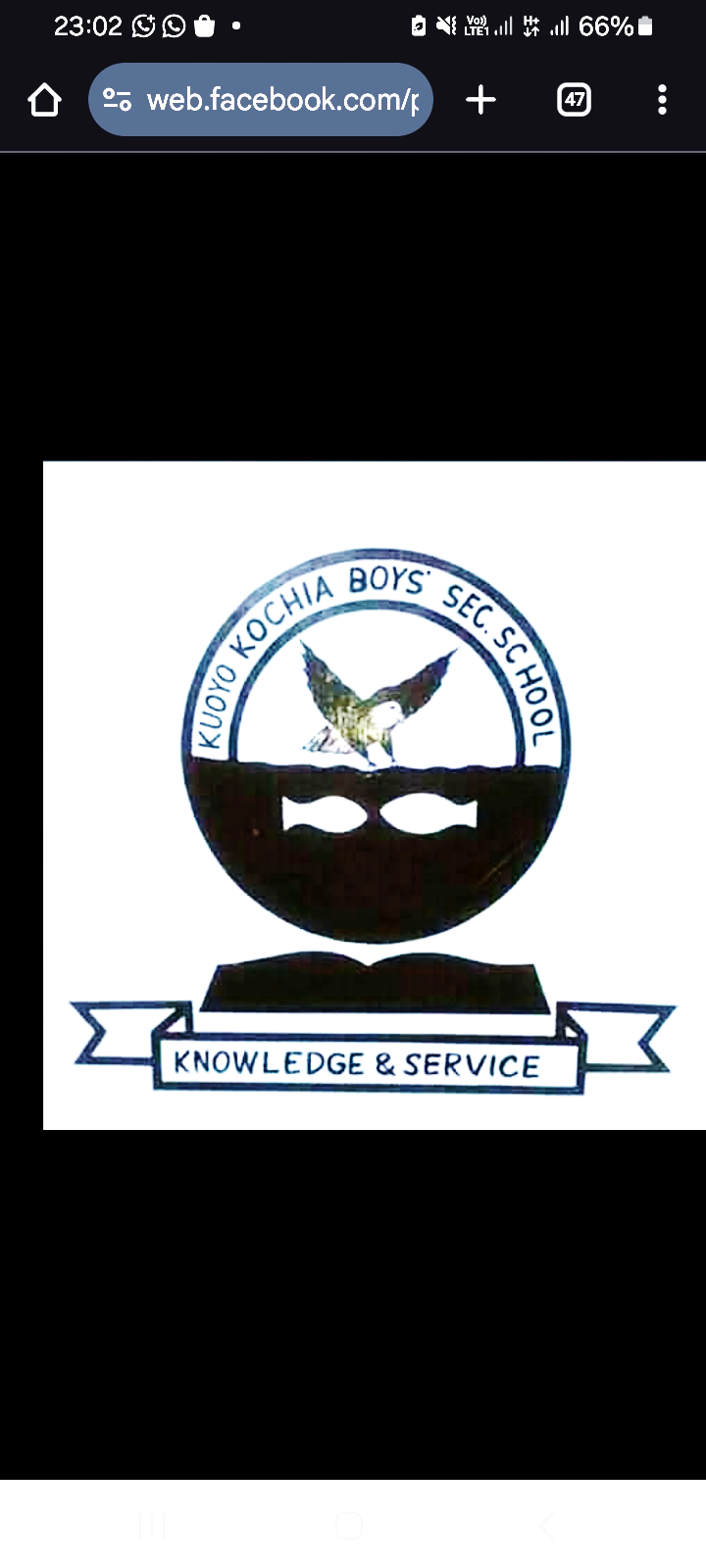
**KUOYO KOCHIA BOYS’ HIGH SCHOOL**



**FORM TWO**

**MATHEMATICS**

**NAME \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ADM NO\_\_\_\_\_\_\_\_\_ Stream\_\_\_\_\_\_ DATE\_\_\_\_\_\_\_\_\_\_\_\_**

**121**

**MATHEMATICS**

**Term 2 2025**

**TIME: 21/2 HOURS**

**MID-TERM TWO EXAMINATIONS 2025**

**INSTRUCTIONS TO THE CANDIDATES**

1. *Write* ***your name*** and ***stream*** *and* ***Admission number*** *in the spaces provided above*
2. *This paper contains* ***two*** *sections;* ***Section I*** *and* ***Section II****.*
3. *Answer* ***all*** *the questions in* ***section I*** *and* ***ALL*** *questions from* ***Section II***
4. ***Show all the steps in your calculations, giving your answers at each stage in the spaces below each question.***
5. *Marks may be given for correct working even if the answer is wrong.*
6. *Non-Programmable silent calculators and* ***KNEC*** *Mathematical tables may be used* ***EXCEP****T where stated otherwise.*

**FOR EXAMINERS’S USE ONLY**

**Section I**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Question | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | Total |
| Marks |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

**Section II** **GRAND TOTAL**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Question | **17** | **18** | **18** | **19** | **20** | **21** | **Total** |
| Marks |  |  |  |  |  |  |  |

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

**SECTION I [ 50 MARKS]**

***(Answer All Questions in this section)***

1. The GCD of two numbers is 17 and their LCM is 140. If one of the numbers is 20, find the other number. (3 marks)
2. Evaluate without using tables or calculators; (3 marks)

1. Use the elimination method to solve the simultaneous equations (3 marks)





1. The sum of interior angles of a regular polygon is 1080o, Find the size of each exterior angle. (3 marks)
2. A trader sold a wrist watch for sh. 3,150 after giving a 10% discount. Find the marked price of the watch. (2 marks)
3. The ratio of the radii of two spheres is 2:3. Calculate the volume of the first sphere if the volume of the second is 20cm3. (3mks)

1. Maina spent one eighth of his May salary on farming, half on school fees and two thirds of the remainder on food. If he spent sh. 3200 on food. Calculate;
2. His February salary. (2 marks)
3. The amount he spent on school fees. (2 marks)
4. Use tables to evaluate: (4 marks)
5. a) The length of a rectangle is three times its width. If its perimeter is 24cm what is the length of the rectangle. (2 marks)

b) Find the Area of the rectangle. (2 marks)

1. Evaluate 540396-726450÷3 (2 marks)
2. Write the total value of the digit in thousands place of the results in (a) above. (1 mark)

1. Solve for in of the following equation. (3 marks)
2. Given that , find the a and b. (3 marks)
3. A bank in Kenya buys and sells foreign currencies as follows.

|  |  |  |
| --- | --- | --- |
| **Currency** | **Buying(Ksh)** | **Selling(Kshs)** |
| 1Sterling pound | 134.20 | 134.65 |
| 1US dollar | 71.40 | 71.84 |

A tourist arrived in Kenya with 4500 US dollars. He converted all the dollars to Kenya shillings at the bank. While in Kenya he spent Ksh. 215,000 and then converted the remaining amount to sterling pounds in the same bank. Calculate the total amount he received to the nearest sterling pound. (3 marks)

1. The length of an arc of a circle is . If the arc subtends an angle 144 at the centre, calculate the radius of the circle (Take (3 marks)
2. Three years ago Maureen was three times as old as Branice. In two years time the sum of their ages will be 62. Determine the **sum** of their present ages. (4 marks)
3. Show how the following operation can be performed using a number line and give the results. (2 marks)

**SECTION II [ 50 MARKS]**

***(Answer all questions in this section)***

1. A straight line passes through points and.
2. Find the gradient of line PQ (2 marks)
3. Find the equation of line PQ inform of . (2 marks)
4. The equation of a line is. Find the:
5. Gradient of the line (1 mark)
6. Equation of the line passing through point and perpendicular to the given line. (3 marks)
7. Find the equation of a line parallel to the line and passes through point.(2 marks)
8. Given that = and is an acute angle find the value of (2 marks)
9. Solve for the acute angle , given that ; (3 marks)
10. A ladder leans against a wall so that its foot is away from the foot of the wall and its top is up the wall. Calculate the angle it makes with the ground (3 marks)
11. Solve for in the following equations

(2 marks)

1. Mr. Kinyua spent 1/4 of his net January salary on school fees. He spent 1/4 of the remainder on

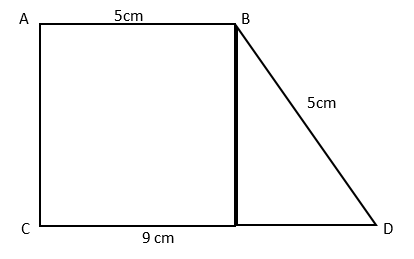
electricity and water bills. He spent 1/9 of what remained on transport. If he finally had

, calculate

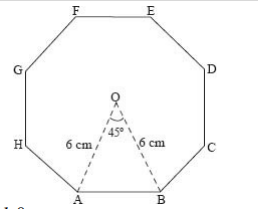
1. His net January salary. (4 marks)
2. Money spent on school fees. (2 mark)
3. The amount he spent on transport. (2 marks)
4. The amount he spent on electricity and water bills. (2 marks)

1. a) A traditional stool has a triangular top which measures and . Calculate the area of its top. (2marks)

b) Find the area of the figure below, given that and angle ( 3 marks)



1. i. The figure below shows a regular octagon ABCDEFGH, with its O as its center. If OA is , find its area. (3 marks)



ii) Find the length of AB in the figure above. (2marks)

1. Akinyi, Bundi, Cura and Diba invested some money in a business in the ratio of respectively. The business realized a profit of . They shared of the profit equally and the remainder in the ratio of their contributions. Calculate the total amount of money received by Diba.

(4 marks)

1. A salesman gets a commission of on the sales up to . He gets an additional commission of on sales above sh. 100,000. Calculate the commission he gets on sales worth
2. marks)
3. The diagonals of a rhombus measure 9.2 cm and 7.5 cm respectively. Calculate the area of the rhombus (2 Marks)

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