



EXAMINATION NO.: _____

THE MALAWI NATIONAL EXAMINATIONS BOARD

2026 JUNIOR CERTIFICATE EXAMINATION

MATHEMATICS

(100 marks)

Subject Number: J131

Time Allowed: 2 hours
8:00 – 10:00 am

Thursday, 4 June

Instructions

1. This paper contains 15 printed pages. Please check.
2. Write your Examination Number at the top of each page of this question paper in the spaces provided.
3. Answer **all** the 20 questions in this question paper.
4. The maximum number of marks for each answer is indicated against each question.
5. Scientific calculators may be used.
6. The blank answer sheet provided at the end of this question paper can be used if required.
7. All working must be clearly shown.
8. In the table provided on this page, tick against the question number you have answered.
9. At the end of the examination, hand in your paper to the invigilator.

Question Number	Tick if answered	Do not write in these columns	
1			
2			
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20			
Total			

AB: J1435/023

J6435/002, 030, 037, 054, 061

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Turn over



Answer **all** the **twenty** questions in the spaces provided under each question.

1. a. Given that $A = \{2, 4, 6, 8, 10, 12\}$ and $B = \{1, 2, 3, 4, 5\}$, present the information in a Venn diagram. **(3 marks)**

- b. Simplify $(64)^{\frac{2}{3}} \times \sqrt{9}$. **(3 marks)**

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2. a. Find the gradient of a line passing through points $P(-2, 4)$ and $Q(4, 8)$. (4 marks)
- b. The n^{th} term of a sequence is given by $3n + 3$. Find the common difference. (4 marks)

Continued/...



3. a. A company sold K100 shares at K124 per share and Makaika had 51 shares in the company. If he bought additional shares for K28 024, calculate the total number of shares he had.

(3 marks)

- b. Make x subject of the formula $a = \frac{b}{x - c}$.

(4 marks)

Continued/...



4. a. Given that $r = -2$, $s = 1$ and $t = 5$, evaluate $\frac{r(t-r)}{s}$.

(3 marks)

- b. Convert 435_6 to base 3.

(4 marks)

5. A bag contains blue and green beads. If there are 24 beads in the bag and of which 17 are blue, find the probability of picking randomly a green bead from the bag. (3 marks)

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6. In figure 1, AB is parallel to FDG.

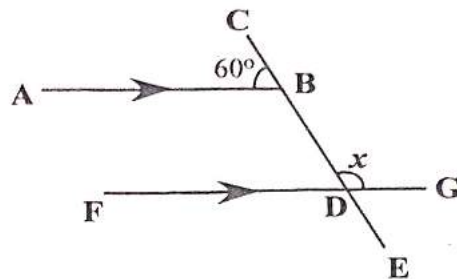


Figure 1

If angle $CBA = 60^\circ$, calculate the value of x .

(4 marks)

7. Simplify $\frac{a-1}{6} - \frac{a+1}{8}$.

(4 marks)

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8. Mrs. Zaona used 7.8 units of water at K1 320 per unit. If a surtax of 16.5% and a fixed charge of K4 310 were included, calculate her bill. (4 marks)

9. Solve the equation $y^2 = \frac{1}{3}(8y - 4)$. (5 marks)

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10. Figure 1 shows a quadrilateral PQRS drawn on the graph paper.

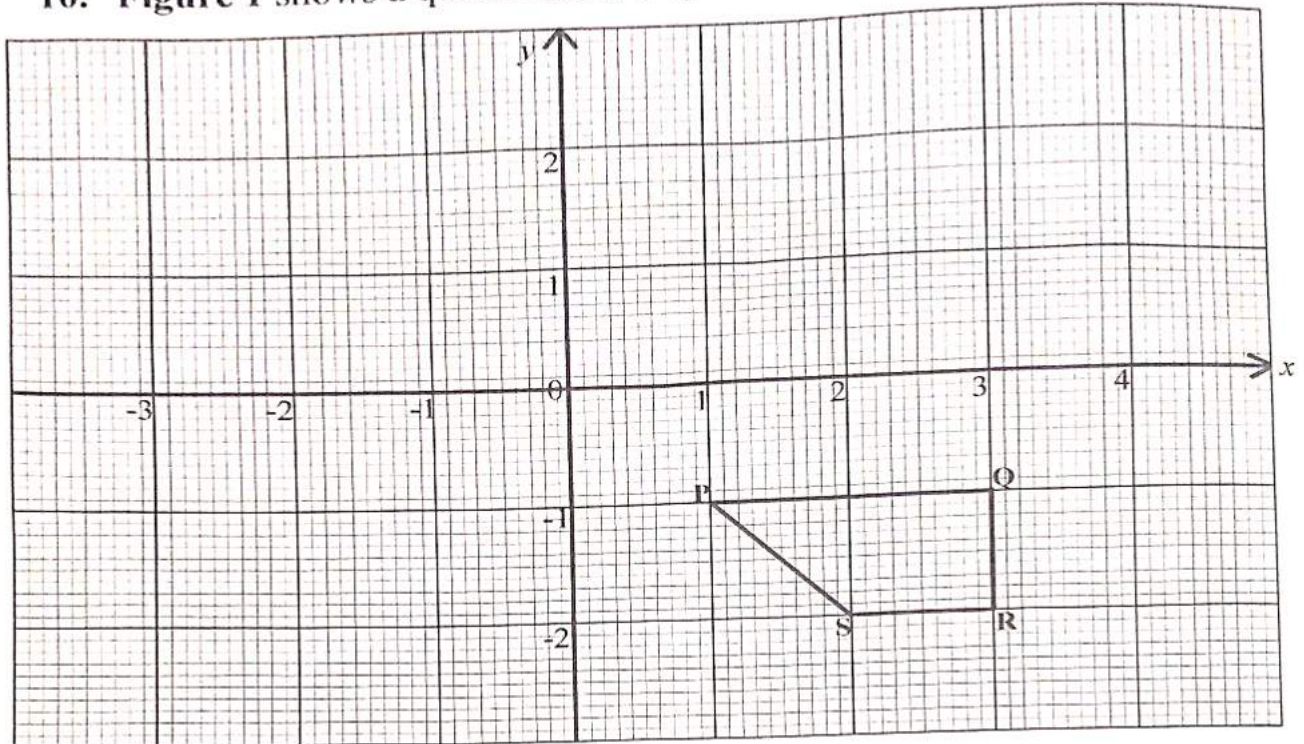


Figure 1

On the same axes and taking $y = x$ as a mirror line, draw a reflection of the quadrilateral PQRS. (3 marks)

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11. Figure 2 is a parallelogram $KLMN$ in which diagonals KM and NL meet at O . $OL = 15$ cm, $MN = 8$ cm and angle $KLO = 90^\circ$.

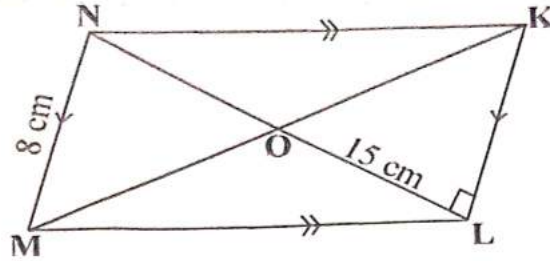


Figure 2

Calculate the length of diagonal KM .

(5 marks)

12. Solve the inequality $\frac{x-2}{3} > \frac{5x-1}{6}$.

(4 marks)

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13. Using a ruler and a pair of compasses only, construct triangle ABC in which $AB = 9$ cm, $BC = 8$ cm and $AC = 10$ cm. In the same diagram, construct an inscribed circle of the triangle ABC .
(6 marks)

14. Brown sugar costing K3 000 per kg is mixed with white sugar costing K3 500 per kg. Given that y kg of brown sugar mixed with 20 kg of white sugar costs K3 000, calculate the value of y .
(4 marks)

Continued/...



15. Use logarithms to simplify $\frac{3.6^3 \times 2.61}{4.8}$, giving the answer correct to 3 significant figures. (5 marks)
16. Calculate the surface area of a closed tin of diameter 5.6 cm and height of 5 cm, giving the answer correct to the nearest centimetre. $\left(\text{Take } \pi = \frac{22}{7} \right)$. (5 marks)

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17. The cost of 5 dresses and 4 blouses is K65 000 and the cost of 7 dresses and 5 blouses is K85 000. Find the cost of a dress and a blouse. (6 marks)

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18. **Figure 3** shows two similar triangles PYQ and XYW in which $YQ=7$ cm, $QP=8$ cm, $WX=11$ cm and PQ is parallel to XW .

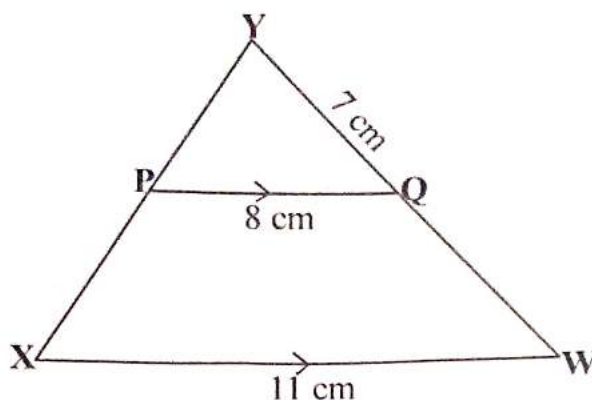


Figure 3

Calculate the length of QW , giving the answer to the nearest whole number. (4 marks)

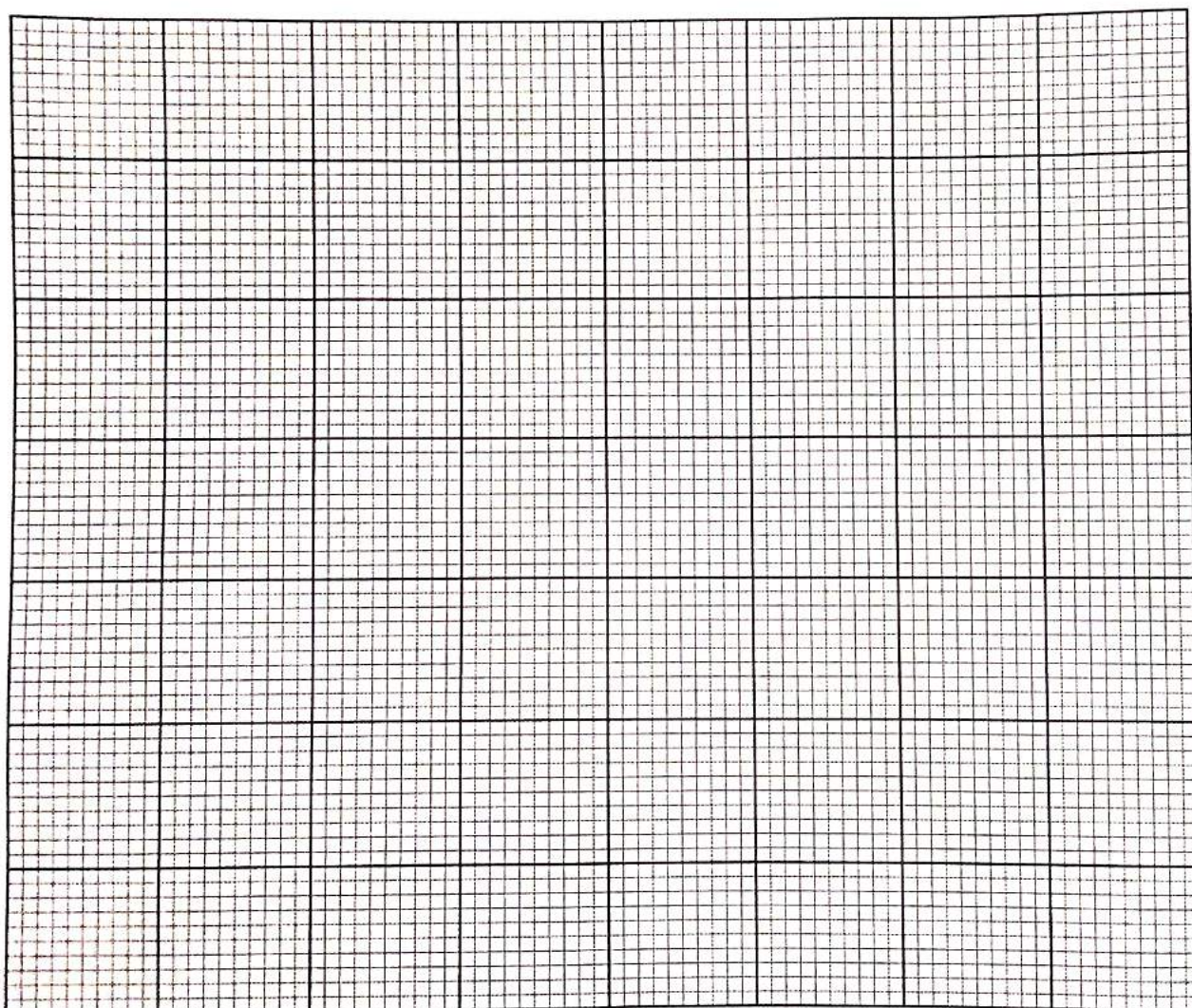
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19. The table below shows the ages of form 2 students at Mphaka secondary school.

Age	13	14	15	16	17
Frequency	2	5	3	8	4

Using a scale of 2 cm to represent 2 units on the vertical axis, draw a histogram for the information on the graph paper below.

(5 marks)



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20. Figure 4 shows graphs of two cyclists M and N.

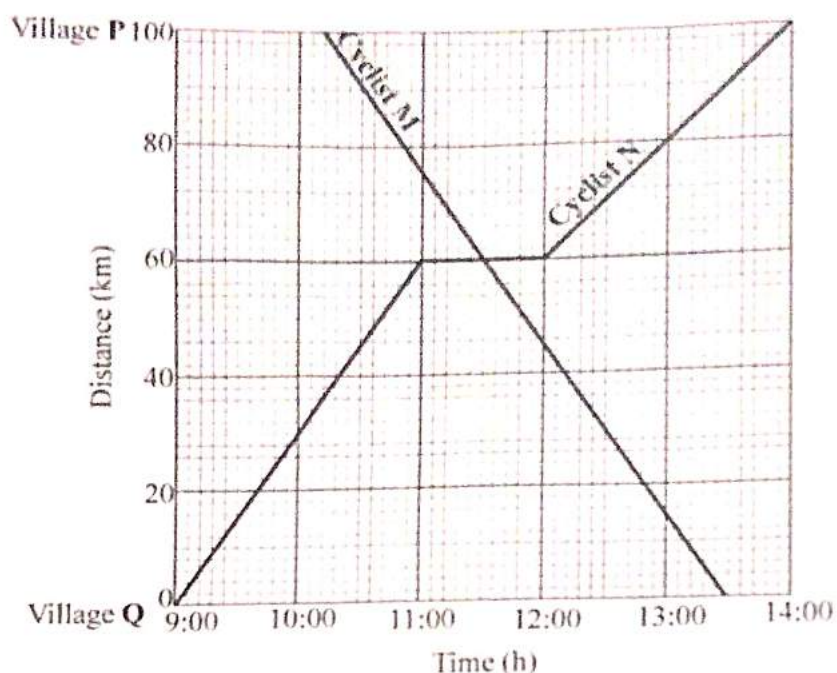


Figure 4

- a. At what time did cyclist
- (i) M leave village P. (1 mark)
- (ii) M meet cyclist N. (1 mark)
- b. Calculate the average speed of cyclist N after resting for 1 hour. (3 marks)

END OF QUESTION PAPER

NB: This paper contains 15 printed pages.



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