

# MBALE DISTRICT ACADEMIC BOARD

## PRIMARY LEAVING MOCK EXAMINATIONS

2024

### MATHEMATICS

Time Allowed: 2 Hours 30 Minutes

Index No.	Random No.						Personal No.		

Candidate's Name: .....

Candidate's Signature: .....

School Random No: .....

District ID: .....

For Examiner's Use Only;

READ THE FOLLOWING INSTRUCTIONS CAREFULLY:

1. This paper has two sections: A and B.
2. Section A has 20 questions (40 Marks).
3. Section B has 12 questions (60 Marks).
4. Attempt all questions in both sections. All answers to both sections A and B. must be written in the spaces provided.
5. All answers must be written in blue or black ball point pens or ink. Only diagrams and graph work must be done in pencil.
6. Unnecessary alteration crossing of work will lead to loss of marks.
7. Any handwriting that cannot be easily read may lead to loss of marks.
8. Do not fill anything in the boxes indicated:

PAGES	MARKS	INITIALS
1 - 5		
6 - 10		
11 - 15		
16 - 20		
21 - 22		
23 - 24		
25 - 26		
27 - 28		
29 - 30		
31 - 32		
TOTAL		

"FOR EXAMINER'S USE ONLY"

Please turn over

MBALE DISTRICT ACADEMIC BOARD -2024

**SECTION A: 40 MARKS**

Questions 1 to 20 carry **two** marks each

1. If  represents 12 trees. work out the number of trees in



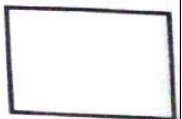
2. Write 627,949 in words.

3. Express 625 in standard form.

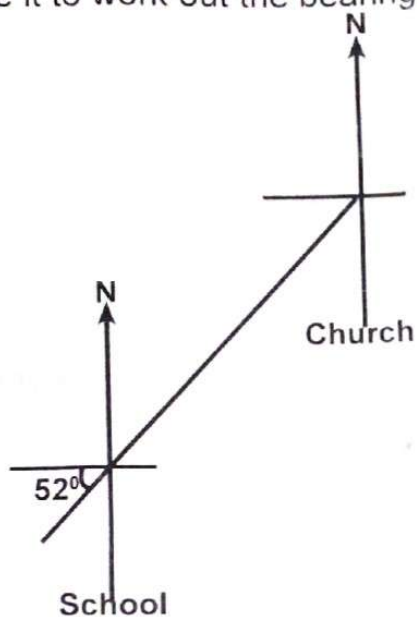
4. Find the next number in the sequence:  
729, 243, 81, 27, \_\_\_\_\_

5. Express  $2\frac{1}{2}\%$  as a decimal number.

6. Given that set  $M = \{\text{prime numbers less than } 10\}$   
Find the number of subsets of set  $M$ .



11. The diagram below shows the two places at different bearings. Study and use it to work out the bearing of the school from the church.

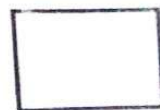


12. Solve the inequality  $3(2 - k) < 18$ .

13. Change 12:45am to 24 hour time.

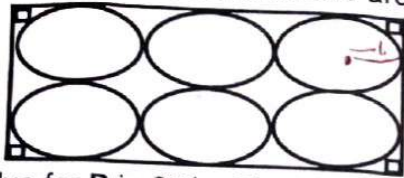
14. If today is Monday, which day of the week will it be 27 days from now?

15. Find the number whose expanded form becomes:  
 $(2 \times 10^3) + (7 \times 10^2) + (9 \times 10^{-1}) + (5 \times 10^0)$



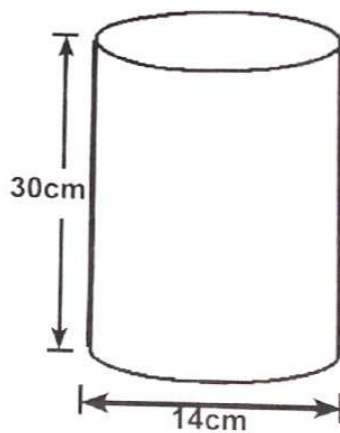


16. The diagram below shows six circular cut outs that form a rectangle below. Use it to work out the area of the rectangle.



17. Solve for  $P$  in  $2^{P+1} \times 2^3 = 2^5$

18. The figure below is a cylinder. Use it to find the volume in cubic centimetres (use  $\pi = \frac{22}{7}$ )



19. Work out the square root of  $\frac{64}{100}$ .

20. If set  $M = \{2, 4, 5, 6, 7, 8\}$  and set  $P = \{1, 3, 5, 7, 9\}$ . Find  $n(P-M)$ .

©



### SECTION B: 60 MARKS

Marks for each part of the question are indicated in the brackets.

21. a) With the help of a ruler, a pencil and a pair of compasses only, construct a triangle PQR such that angle PQR is  $60^\circ$ , angle PRQ is  $75^\circ$  and line PQ is 8cm. (05 marks)

- b) Construct a perpendicular line from R to meet line PQ at O. (01 mark)

22. Nambi went shopping with forty thousand shillings as shown in the table below:

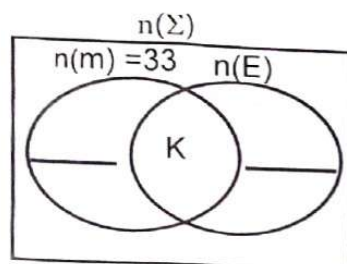
- a) Complete the table if her change was sh. 2,000. (05 marks)

Items	Unit cost	Amount
2kg of sugar	sh. 5,200 per kg	sh. _____
3kg of rice	sh. _____ per kg	sh. 18,000
_____ litres of milk	sh. 2,400 per litre	sh. _____
Bill		sh. _____

23. In a P.7 candidate class, some candidates like Mathematics (M) and English (E), 33 candidates like Mathematics, 18 candidates like only English, K candidates like both subjects while 2k candidates like only Mathematics.

a) Complete the venn diagram below using the information above.

(02 marks)



b) Find the number of candidates who like English.

(03 marks)

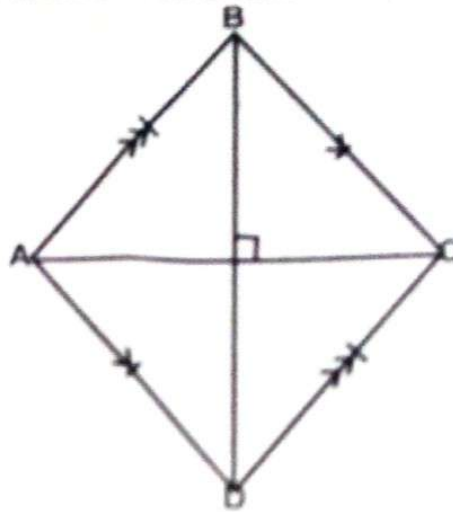
24. a) Express  $\frac{2}{11}$  as recurring decimals.

(02 marks)

b) Work out:  $\frac{4.8}{0.12} \times \frac{8.1}{0.03}$

(03 marks)

25. The perimeter of rhombus **ABCD** below is 52 metres whose diagonal **AC** is 10 metres. Study and use it to answer the questions that follow.



a) Find the diagonal BD.

(03 marks)

b) Work out its area.

(02 marks)



26. Richard has a radio which uses 12 volt batteries. Each battery has 1.5 volts.

a) Work out the number of batteries needed to be used in his radio.

(03 marks)

(C)



b) If each pair of batteries costs sh. 2,000; Find the amount of money needed for his radio. (02 marks)

27. a) In an interview of 25 questions, 4 marks were awarded for each correct answer, 1 mark was deducted for each wrong answer. If Betty passed 18 questions only, find her score. (03 marks)

b) Given that Paul scored 50 marks, how many did he fail? (02 marks)



(02 marks)

28. a) Solve the equation:  $12 = \frac{72}{3p}$ .

b) A school bursar is 32 years old, his son is 14 years old. After how many years will bursar be twice the age of his son? (03 marks)



29. A taxi driver left Kampala at 11:40 a.m to Iganga driving at 60 kilometres per hour. The driver reached Iganga at 3:10p.m.

a) Find the time taken by the driver to reach Iganga. (03 marks)

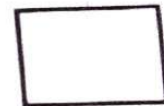
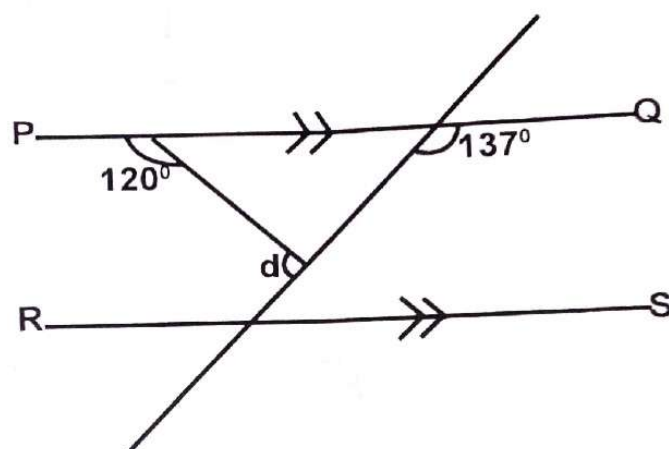
b) Calculate the distance between Kampala and Iganga. (02 marks)

(C)

Mbale District Academic Board P.7 Mock -2024

30. a) A regular polygon has 14 right angles. How many sides has the polygon? (02 marks)

- b) In the diagram below, line **PQ** is parallel to line **RS**. Use it to find angle **X**. (03 marks)



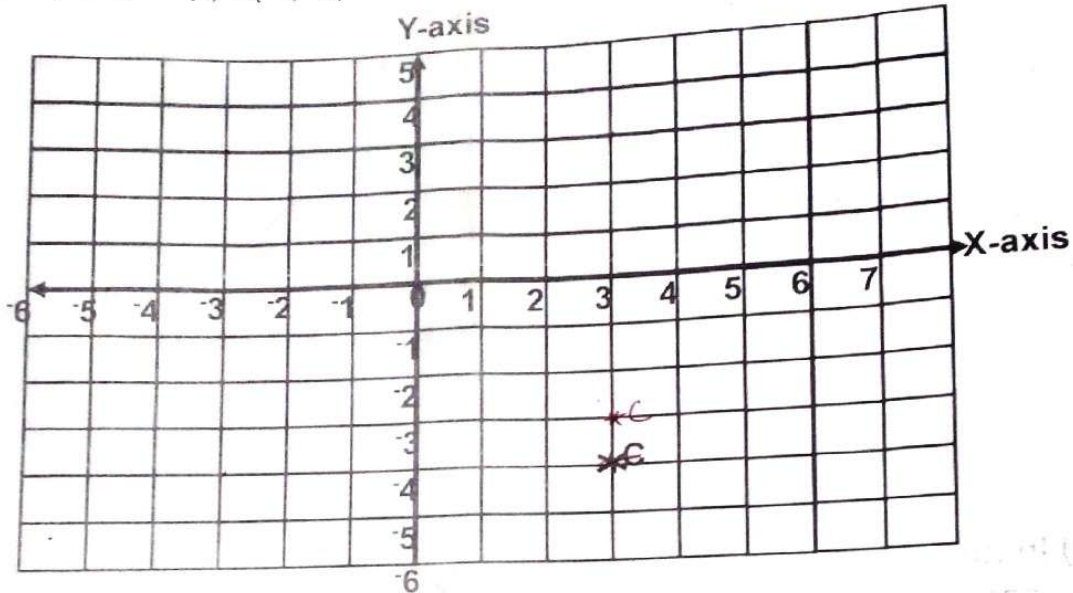
31. a) Given that  $y05_{\text{six}} = 1301_{\text{four}}$ . Find the value of  $y$ . (03 marks)

- b) Change  $101_{\text{two}}$  to a decimal base. (02 marks)

32. a) Plot the points on the graph below.

(02 marks)

- i) A (-3, 3)    (ii) B (3, 3)



b) Give the co-ordinates for point C.

(01mark)

c) Locate point D such that when point A joins point B, point C, point D and point A will form a square of 36 square units. (02 marks)

