

# MBARARA CITY EXAMINATIONS BOARD

## PRIMARY LEAVING MOCK ASSESSMENT, 2024

### MATHEMATICS

*Time Allowed: 2 hours 30 minutes*

Random No.						Personal No.		

Candidate's Name: .....

Candidate's Signature: .....

District ID No: 

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Read the following instructions carefully:

1. Do not write your **school** or **district name** anywhere on this paper.
2. This paper has **two** sections: **A** and **B**. Section **A** has **20** questions and Section **B** has **12** questions. The paper has **16 printed pages** altogether.
3. Answer **all** questions. **All** the working for both sections **A** and **B** must be shown in the spaces provided.
4. **All** working must be done using a **blue** or **black** ball point pen or ink. Any work done in pencil other than graphs and diagrams will **not** be marked.
5. **No calculators** are allowed in examination room.
6. Unnecessary **changes** in your work and hand writing that cannot easily be read may lead to **loss** of marks.
7. Do **not** fill anything in the table indicated: **"For Examiners' Use Only"** and boxes inside the question paper.

FOR EXAMINERS' USE ONLY		
Qn. No.	Marks	EXR'S NO
1 - 5		
6 - 10		
11 - 15		
16 - 20		
21 - 22		
23 - 24		
25 - 26		
27 - 28		
29 - 30		
31 - 32		
TOTAL		

**SECTION A : 40 MARKS.**

*Answer all questions in this section.  
Questions 1 to 20 carry two marks each.*

1. Work out:

$$\begin{array}{r} 843 \\ + 45 \\ \hline \end{array}$$

2. Subtract:  $3y + 3$  from  $6 - y$

3. Given that set  $P = \{e, a, t\}$   
Form all the subsets in set P.

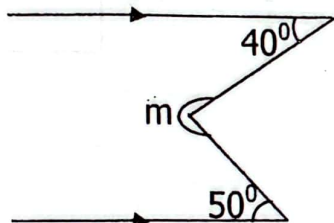
4. The product of two numbers is 432 while their GCF is 6.  
Calculate the Lowest Common Multiple (LCM) of the two numbers.

5. Tom's cow gives 12000mls of milk per day.  
If Tom sales it at Shs. 1500 a litre, how much does he earn per week?

6. Use the digits 3, 0, 5 and 1 to form the biggest and smallest 4-digit numerals.  
(i) biggest =

(ii) smallest =

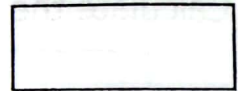
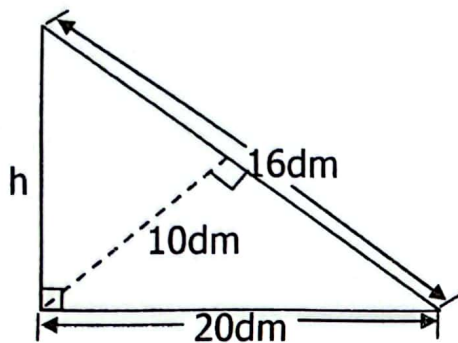
7. Calculate the size of angle m in degrees.



8. Write  $7.034 \times 10^{+3}$  as a single numeral.

9. The price of a textbook reduced by 10% to Shs. 63,000.  
Work out the cost price of the textbook.

10. Find the height (h) in dm on the triangle below.



11. Given that  $y = -11$ , solve for  $3y^2 + 3$ .

12. Work out the value of **3** and place value of **0** in the numeral 10367.

13. At Tom's forex bureau, a US dollar (\$) costs Ug Shs. 3730.  
A tourist had Ug Shs. 2,797,500, how many US dollars can he get from the forex bureau?

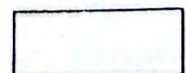
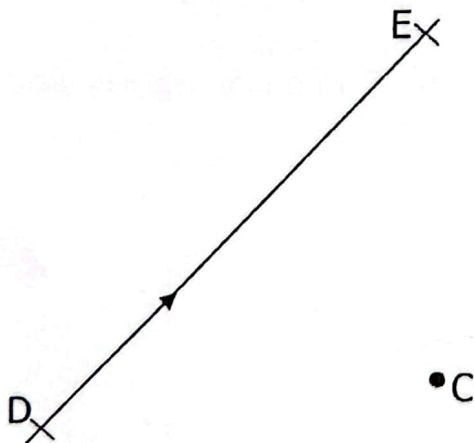
14. Express  $\frac{4}{9}$  as a repeating decimal.

15. Work out the mean of 16,  $t$ ,  $t + 1$  and  $2t + 3$ .

16. If today is Friday, what day of the week was it 47 days ago?



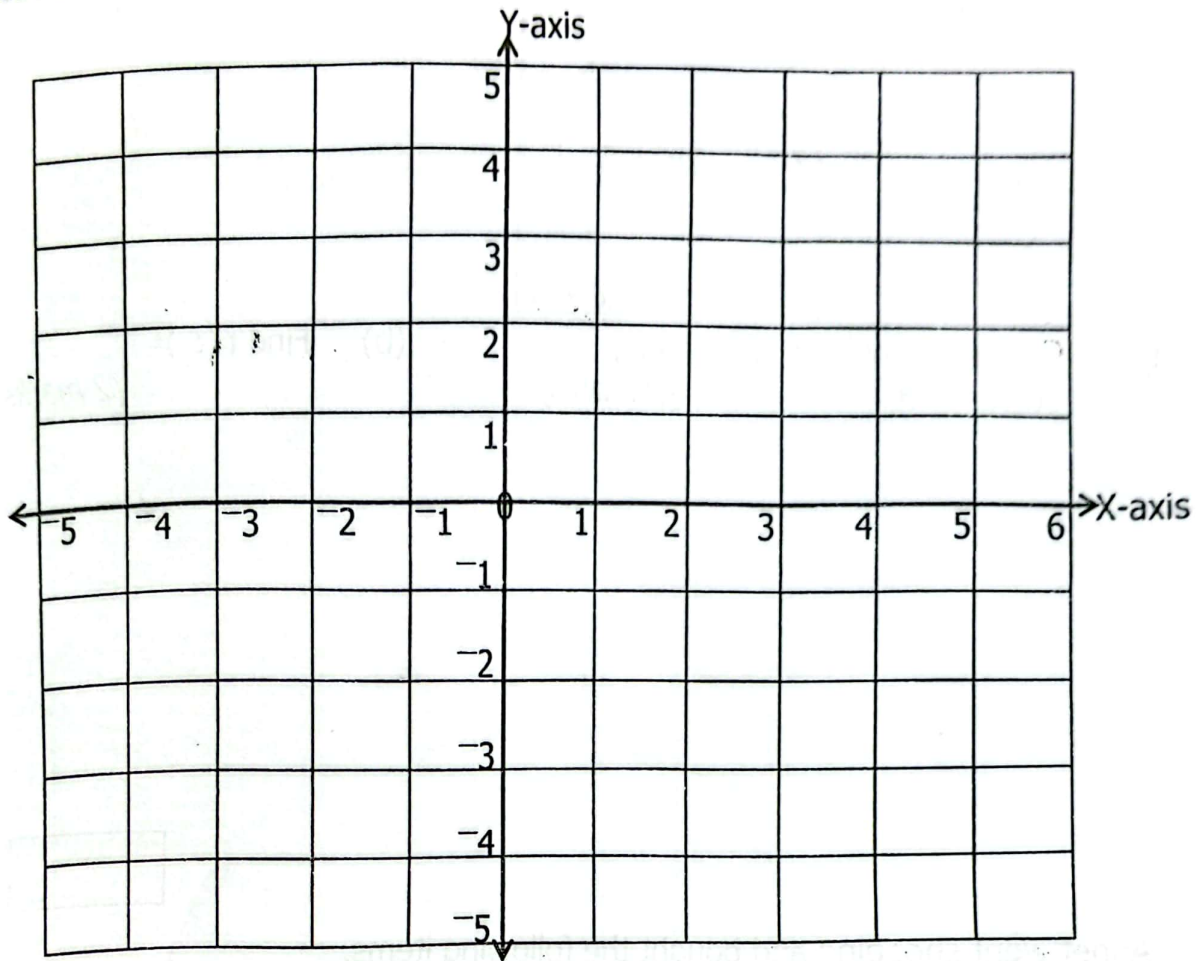
17. A taxi arrived at 1:40pm. If the journey took  $2\frac{1}{2}$  hours, at what time did it depart?
18. Cards were numbered with counting numerals less than 12 and put in a bag. Find the probability of picking a card at random that is marked with a prime numeral from the bag.
19. Solve for base  $t$ :  $14_{\text{ten}} = 24_t$ .
20. Using a ruler, a pencil and a pair of compasses only, construct a line AB through point C parallel to line DE.



**SECTION B : 60 MARKS.**

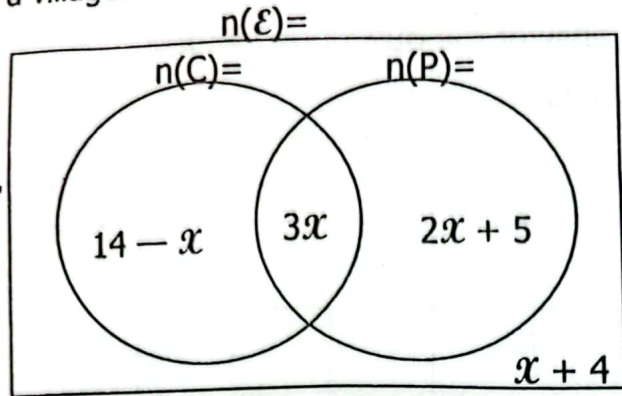
Answer **all** questions in this section.  
Marks for each question are indicated in the brackets.

21. Use the co-ordinate graph below to answer the questions that follow;



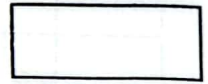
- (a) Plot the following coordinates on the graph above;  
 $A(-4, 3)$ ,  $B(-1, -2)$ ,  $C(2, -2)$  (3 marks)
- (b) Find the coordinates for point D so that when ABCD joined together forms an isosceles trapezium. (1 mark)

22. The Venn diagram below shows farmers who grow cassava (C) and potatoes (P) in a village.



- (a) Given that  $n(C) = 22$  farmers, solve for  $x$ . (2 marks)

- (b) Find  $n(E) =$  (2 marks)



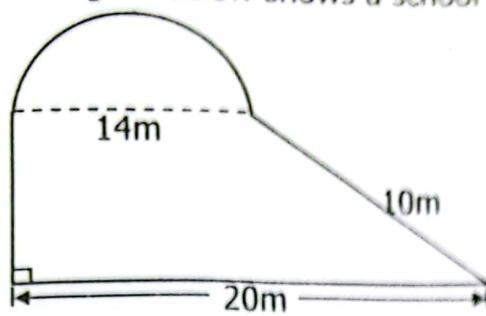
23. Annet went shopping and bought the following items.

- (i)  $1\frac{1}{2}$  kg of sugar at Shs. 4000 per kg.
- (ii) 700ml tin of cooking oil at Shs. 7000 a litre.
- (iii) 4 bars of soap at Shs. 20,000.

If she paid Shs. 27,810, what percentage discount did she get? (6 marks)



24. The figure below shows a school garden.

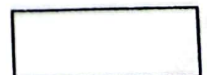


- (a) Calculate the area covered by the school garden.

(4 marks)

- (b) Find the total distance round the figure above.

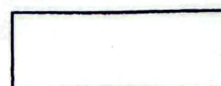
(2 marks)



25. (a) Two pupils planted trees 20 metres apart in a school compound.  
If they planted 20 trees in a line, what total distance did they cover?  
(2 marks)

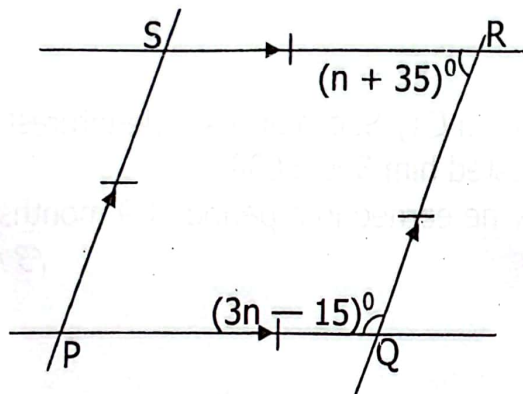
- (b) Use distributive property to solve;  
 $(67 \div 7) - (18 \div 7)$  (2 marks)

26. (a) Tap A takes 6 minutes to fill a tank, while tap B takes 8 minutes to empty the same tank.  
How many minutes will it take for the tank to be full when both taps are opened at the same time?  
(2 marks)
- (b) A parent bought 100 shares from a City Sacco at a simple interest rate of 15% per annum. Each share cost him Shs. 5000.  
Work out the amount of money he earned in a period of 9 months.  
(3 marks)



27. (a) The interior angle of a regular polygon is  $90^\circ$  more than its exterior angle.  
How many sides has the polygon? (3 marks)

- (b) The figure below is a rhombus PQRS.



Calculate the size of angle PQR.

(3 marks)

28. (a) Abdul is 14 years old while Joan is 33 years old.  
After how many years will Joan be twice as old as Abdul?

(2 marks)

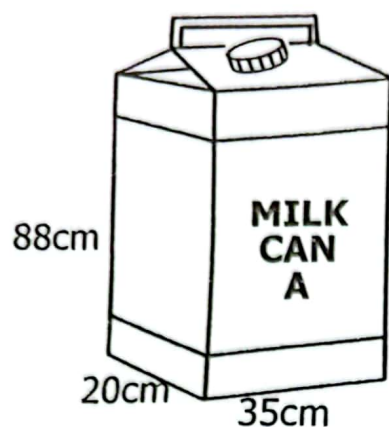
- (b) Find the solution set for;  $2y + 3 < 7$ .

(3 marks)

29. The ratio of boys to girls in a candidate class is 3 : 4 respectively.  
If there are 20 more girls than boys, how many boys and girls are in the class?
- (i) Boys (2 marks)      (ii) Girls (2 marks)



30. The two milk cans below hold the same amount of milk when filled up completely.



- (a) Calculate the height (h) of milk can B.

(3 marks)

- (b) How many litres of milk does Can B hold when it is  $\frac{1}{2}$  full?

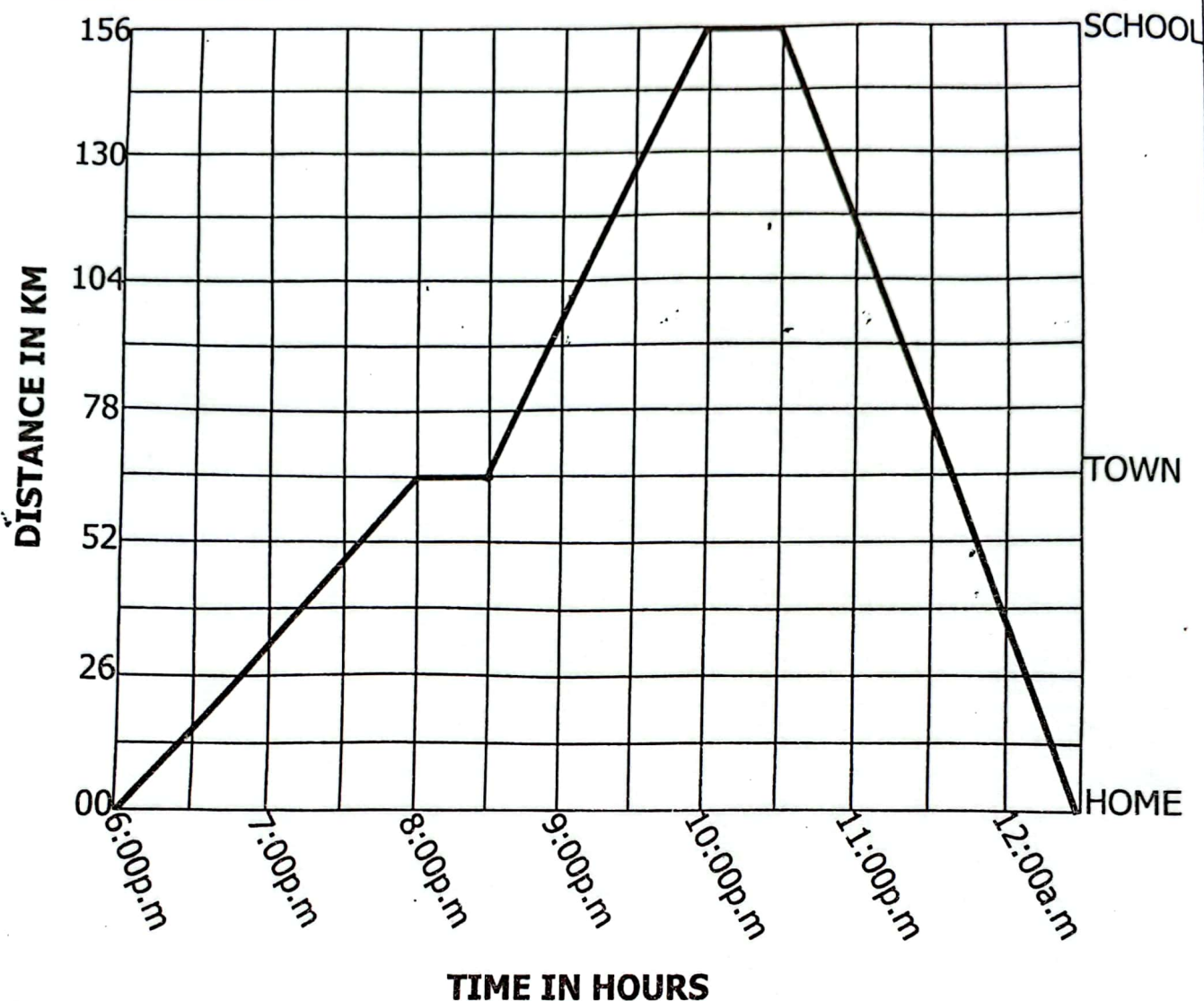
(3 marks)

31. With the help of a ruler, a pencil and a pair of compasses only;  
(a) Construct a parallelogram HERO of length  $HE = 7\text{cm}$ ,  $ER = 5\text{cm}$  and angle  $EHO = 120^\circ$ . (4 marks)

- (b) Measure diagonal EO.

(1 mark)

32. The travel graph below shows a teacher's journey from home via town to school and then back home.



- (a) For how long did he take travelling from home to school? (1 mark)
- (b) How far is the school from town? (1 mark)
- (c) Express his arrival time to home in a 24-hour clock system. (1 mark)
- (d) Calculate his average speed for the whole journey. (2 marks)