

UNITED TEACHERS' EDUCATION BUREAU

MOCK EXAMINATION

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 **12 printed** pages.
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 the examination room.
6. Unnecessary **changes** in your work and handwriting 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 SIGN
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. Workout: $34 + 51$

2. Given that set R = {c, d, e}. List all the subsets of set R.

3. Simplify: $\neg 3 + \neg 15$

4. Simplify: $4(m - 3) - (m - 5)$

5. Change 0.072kg to grammes.



2

6. A dozen contains 12 items. How many dozens will be required to contain 114 books?

7. Find the next number in the sequence:

34, 23, 16, 11, 8, _____

8. Study the figure and use it to answer the questions below

Find the value of a .



9. Using a ruler and a protractor, draw an angle of 130° in the space below

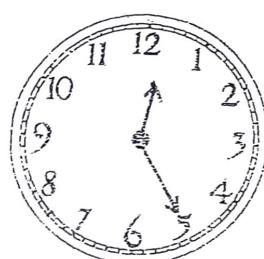
10. Write 235_{six} in expanded form.

3

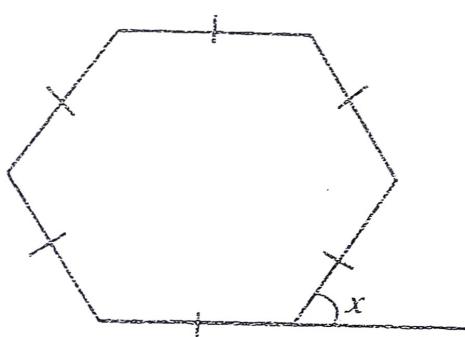
11. In a bag, there are 5 mangoes, if Joan is asked to pick a fruit from the bag at random. Find the probability of picking a mango.

12. Workout the median of the following integers:
-2, +5, 0, -3, +6 and -4

13. The time on the clock face reads as the morning time as shown below:
Express this time in 24hr clock system.

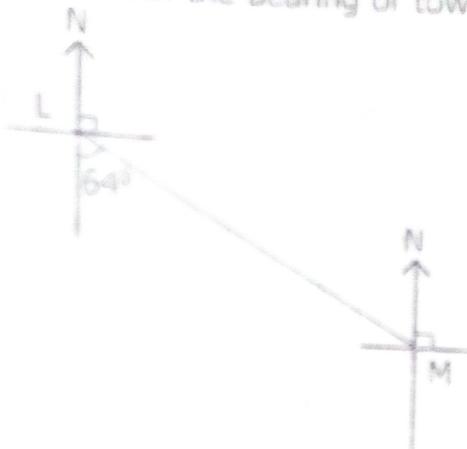


14. Study the regular polygon below carefully: Find the value of angle marked x.



15. Workout: $1\frac{4}{5} - \frac{9}{14} \div \frac{3}{7}$

16. The diagram below shows the position of two towns L and M.
Use it to answer the question.
Workout the bearing of town M from town L.



17. The cost of a radio in USA is US dollars 120. How much would Bosco pay for the same radio in Uganda Shillings if one USA dollar cost Uganda Shs. 3850.
18. Express 5m/sec into km/hr.
19. Write 0.904 in Standard form.
20. The mean of: 7, 9, 5, $(x + 2)$ and 6 is 8. Calculate the value of x .



SECTION B: 60 MARKS

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

21. (a) Express $0.545454\dots$ as a common fraction. (02 marks)

(b) Simplify: $\frac{3.6 \times 2.4}{1.2 \times 4.8}$ (03 marks)

22. (a) Workout: $101_{\text{three}} + 122_{\text{three}}$ (02 marks)

(b) Simplify: $3^2 \div 3^5$. (02 marks)

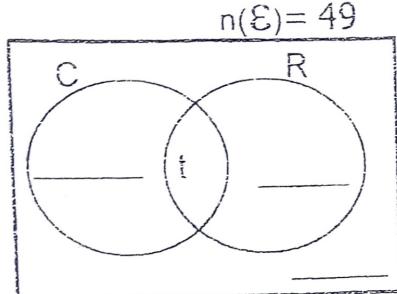
- (c) Write in figure: "Six hundred sixty six thousand sixty six. (01 mark)



23. In a village of 49 farmers, 20 grow cassava (C), 25 grow Rice (R) and t grow both Cassava and Rice, while 3t farmers grow neither of the two food crops.

(a) Use the information given to complete the venn diagram below.

(03 marks)



(b) Find the value of t.

(02 marks)

(c) How many farmers grow neither cassava nor Rice?

(01 mark)

24. (a) Job, Bob and Rose shared some money in the ratio of 2:3:7 respectively. If Rose got Sh. 240,000 more than Job. How much money did they share altogether.

(04marks)

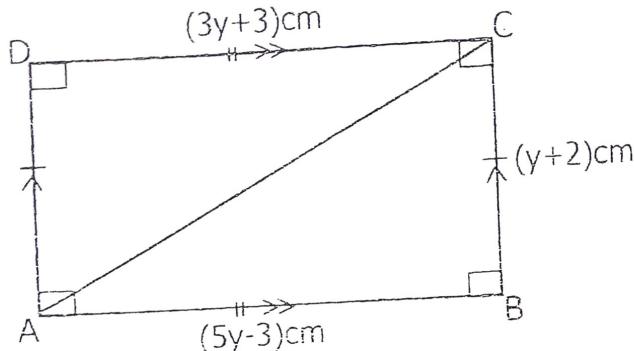
- (b) Eight girls can dig the school garden in 3 days. How many more girls are needed in order to complete the work in only one day working at the same rate.

(02 marks)



25. Study the figure below and answer the questions.

(a) Work out the value of y .
(02 marks)



(b) Calculate the length \overleftrightarrow{AC} .
(02 marks)

26. (a) A Primary Seven class was given a Mathematics test that was marked out of 20. Study the table and complete it.
(03 marks)

Marks	No. of Pupils	Total
3	4	12
	9	45
6		84
8	8	64
15	5	

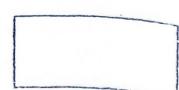
(01 Mark)

(b) What was the modal mark?

(c) Work out the average mark scored by the class.
(02 marks)



27. A lady went shopping and bought the following items:
4kg of beans worth sh. 8000.
A half litre of cooking oil at sh. 6000 per litre.
8 tomatoes at sh. 500 for every 4 tomatoes.
- (a) Calculate the total cost of all the items. *(03 marks)*
- (b) If she paid sh. 11,400 after a discount, workout the percentage discount. *(02 marks)*
28. (a) Using a ruler, pencil and a pair of compasses only, construct a triangle MTN where; $\overline{MT} = 7\text{cm}$, angle $MTN = 120^\circ$ and angle $TMN = 30^\circ$. *(04 marks)*
- (b) (i) Measure length \overline{TN} . *(01 mark)*
- (ii) Measure angle TNM. *(01 mark)*

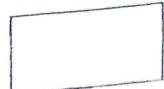


29. Jinja is 120km from Tororo. A taxi takes $1\frac{1}{2}$ hrs to cover that Journey. But while coming back, a taxi travels at a speed of 48km/hr on the same road.
(a) Find the total time taken for the whole journey. (02 Marks)

(b) Workout the average speed of the taxi for the whole journey. (02 Marks)

30. A water tank is $\frac{2}{3}$ full of water, when 600 litres of water is added to the tank, it becomes $\frac{4}{5}$ full of water.

(a) What fraction of the tank was added with water ? (02 Marks)



(b) Calculate the capacity of the tank when completely full of water.

(02 Marks)

31. The interior angle of a regular polygon is 100° more than the exterior angle.

(a) Calculate the size of the exterior angle.

(02 Marks)

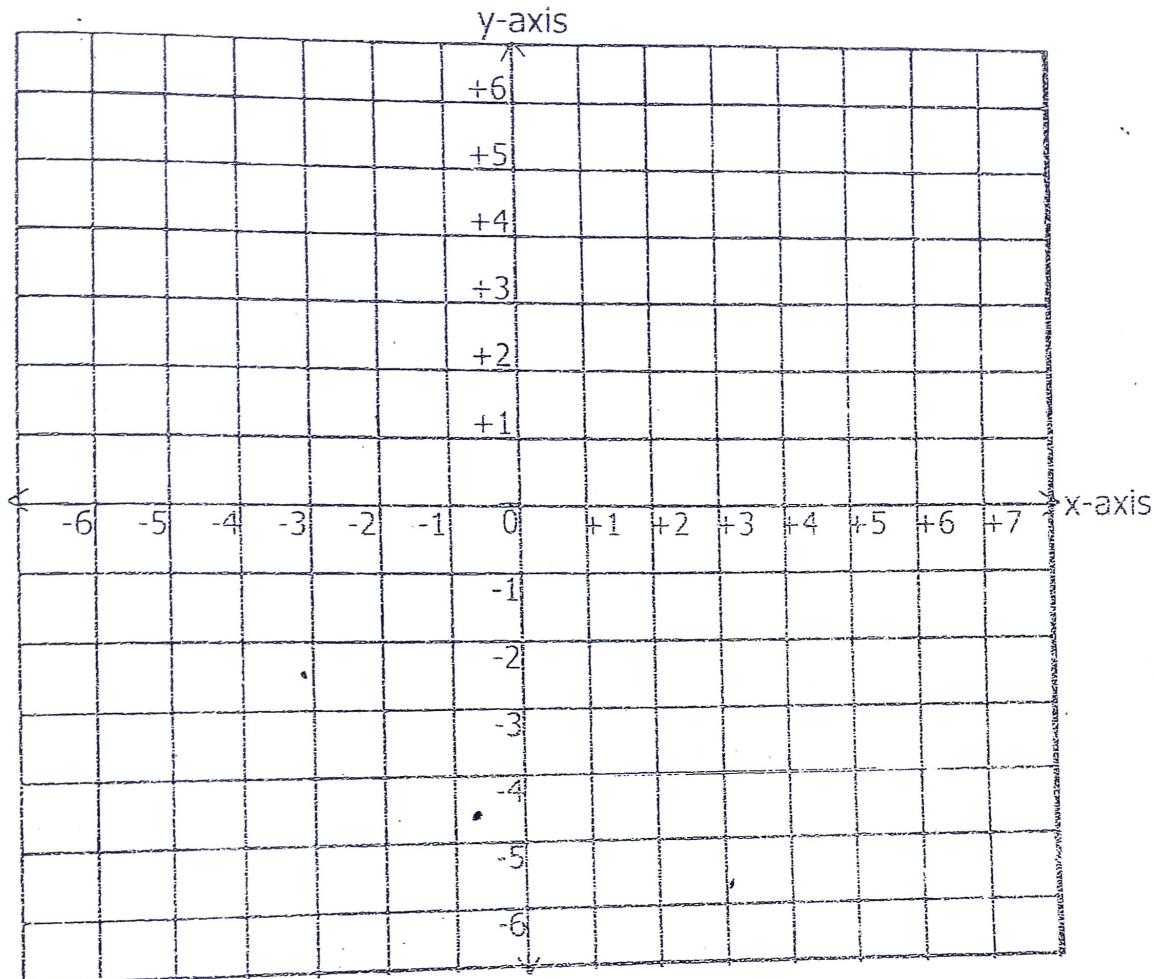
(b) Name the polygon.

(02 Marks)

2. Plot the following points on the co-ordinate graph below:

A (-5, -3) B (+3, -2) C (+4, +6) D (-4, +5)

(04 Marks)



(b) Join the points and name the figure formed.

(01 mark)

