MASAKA CITY EXAMINATIONS BOARD
MOCK EXAMINATION- 2024
MATHEMATICS
Time allowed: 2hours 30 minutes

INDEX NUMBER

RANDOM NUMBER						PERSONAL NUMBER			

Candidate's Name: .....

Candidate's Signature: .....

School Random Number: .....

Read the following instructions carefully:

1. This paper has two sections: **A and B**. Section A has **20** questions and **Section B** has**12** questions. The paper has **14 printed pages**

2. Answer **all** questions. **All** the working for both Sections **A** and **B** must be shown in the spaces provided. 3`

3. **All** working must be done using a **blue** or **black** Ball point pen or **ink**. Any work done in pencil will NOT be marked except drawings and diagram.

4. Unnecessary **changes** in your work and hand writing that cannot be easily read may lead to **loss of marks.**

5. **No calculators** are allowed in the examination Room.

6. Do not fill anything in the table indicated **"For examiners' use only"** and the boxes inside the Question paper.

FOR EXAMINERS' USE ONLY

Qn. No.	MARKS	EXR'S INITIALS
No		
1-5		
6-10		
11-15		
16-20		
21-22		
23-24		
25-26		
27-28		
29-30		
31-32		
TOTAL		

Turn Over

SECTION A: 40 MARKS

*Answer **all** the questions in this section.*

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

1. Multiply 23 by 2

2. Work out $3^3 + 3^0$

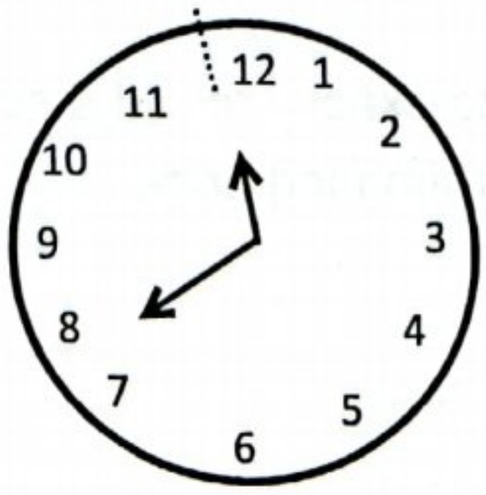
3. A man got CDIX votes in an electron, express the number of votes in Hindu Arabic numerals.

4. Given that A = {The first 4 even numbers} B = { 2,3,4,5,8} Find n(AUB)

5. Workout the sum of: $^-4$ and $^+9$

6. Work out
$$\begin{array}{r} 1\,1\,0\,1_{two} \\ -\quad 1\,1\,1_{two} \\ \hline \\ \hline \end{array}$$

7. A birthday party ended in the evening at the time shown on the clock face below



Express the evening time in the 24-hour clock system.

8. Work out: $\frac{7}{8} \div 2\frac{1}{4}$

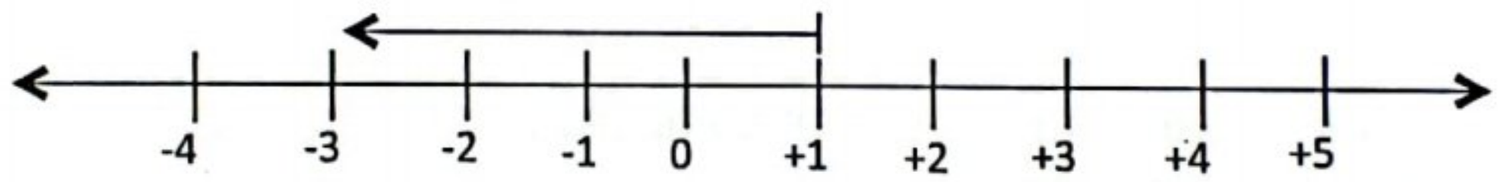
9. Using a ruler, a pencil and a pair of compasses only, construct an angle whose complement is 30^{o}.

10. Musa turned clockwise through 135 to face South West. In which direction was he facing?

11. A piece of string 88m long fits exactly round a school circular swimming pool. Find the radius of the swimming pool.

12. Simplify: $2(4x - 3) - 4(x - 2)$

13. Find the additive inverse of the integer shown on the number line below.



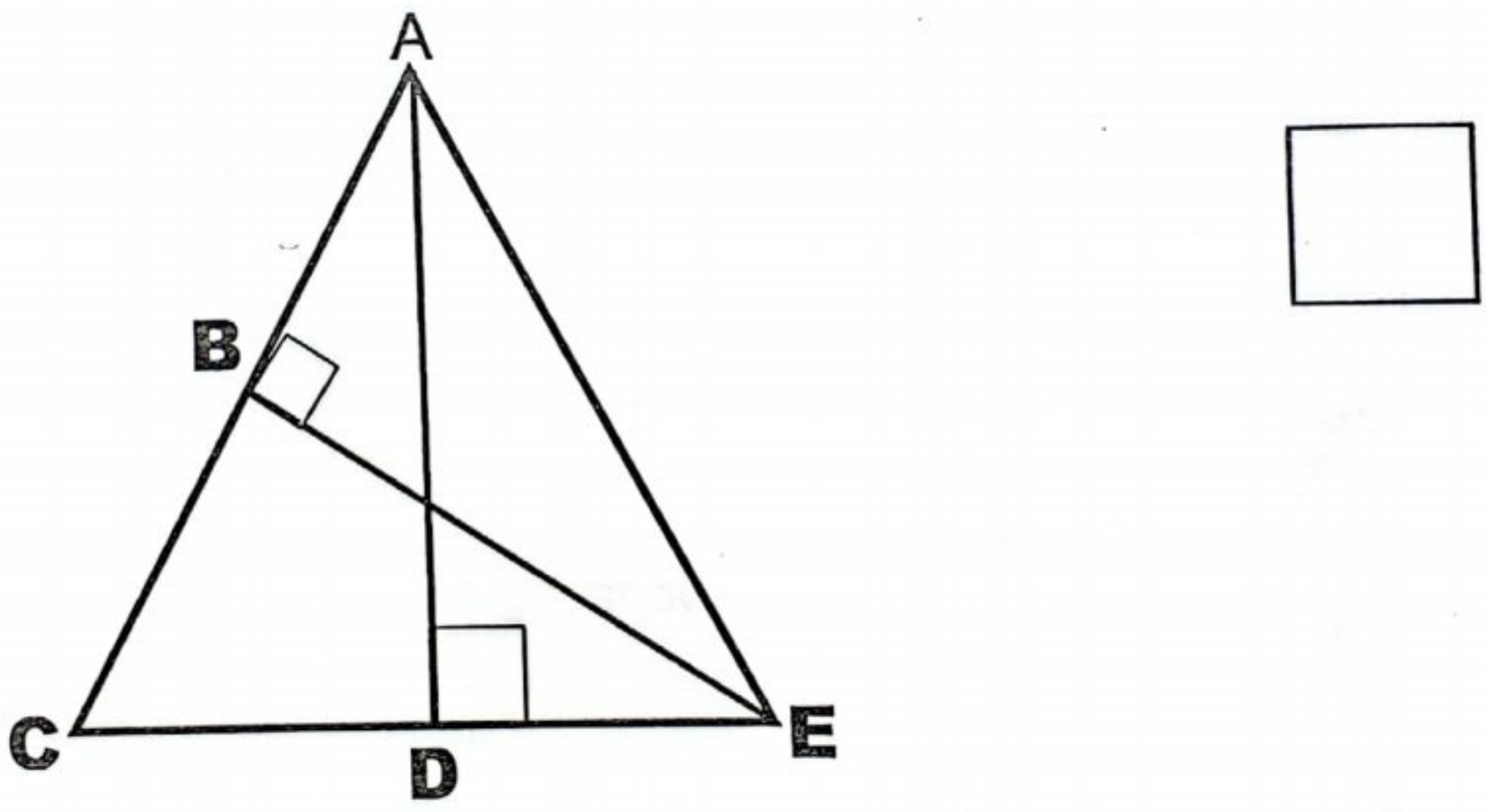
14. After selling an item for Sh. 72000, a shop attendant realized he had made a loss of 10%. Find the cost price of the item.

15. A tray contains 30 eggs. If 25 of them are good and the rest are bad, Find the probability of randomly selecting a bad egg from the tray.

16. Solve: $3^{2t+1} = 27$

17. A lady bought 80 bags of sugar of 50 kilograms each for her school. Express the total number of Kilograms she bought as tonnes.

Carefully study the figure below and answer the questions.



18. Given that AC = 30cm, BE =18cm and CE=45cm, Find the length of AD

19. Pauline borrowed sh.200,000 from a SACCO for a period of 2 years at an interest rate of 10% per month. Calculate the simple interest paid after the 2 years.

20. A complete full jerrycan contains 20 litres of milk. When 20 cupfulls are drawn out, it becomes a full. Find the number of cupfulls that fill a 20 litre jerrycan.

SECTION B: 60 MARKS

Answer all questions in this section

Marks for each question are indicated in brackets

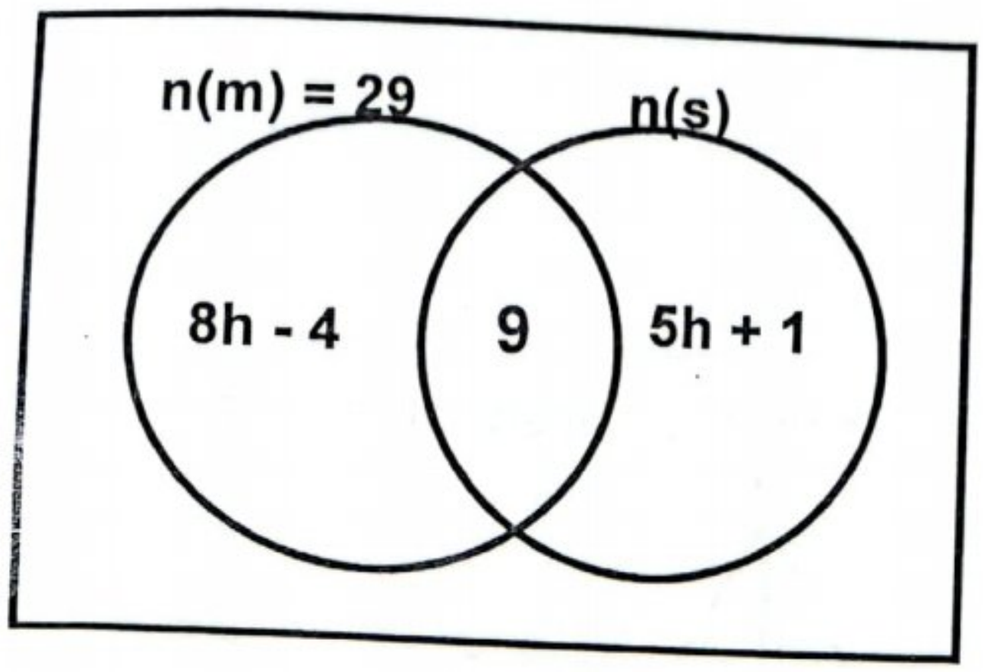
21. a). Simplify: $\frac{5}{12} - \frac{1}{2} + \frac{1}{4}$ ***(02 Marks)***

b). Workout: $\frac{2.9 + 1.6}{0.5 \times 0.06}$ ***(03 Marks)***

22. a). Find the arithmetic mean of $5, (x + 1)$ and $2x$ ***(02 Marks)***

b). Solve: $3 - \frac{2t}{4} < 5$ ***(03 Marks)***

23. The venn diagram below shows the number of pupils who like, Math (M) and Science (S) in LM Junior school. Study it carefully and answer the questions that follow.



a) Find the value of h

(02 Marks)

b) Calculate the number of pupils who like only one subject. ***(02 Marks)***

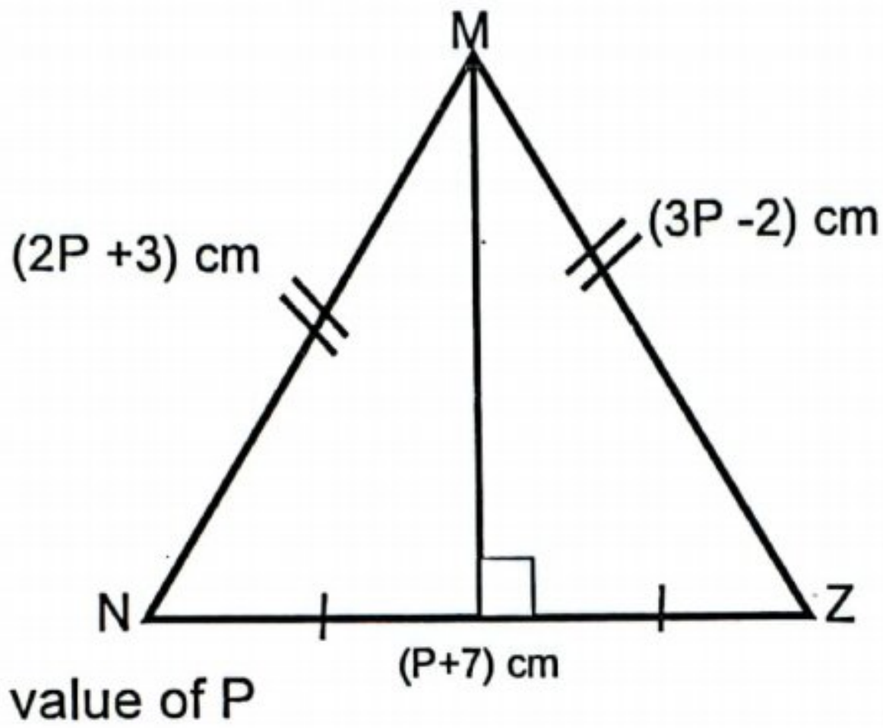
24. A motorist covered a distance of 300km in 3 hours traveling from Kiryandongo to Gulu, he rested for half an hour and then continued to Kitgum covering a distance of 180km at a speed of 120km/hr.

a) Calculate the distance from Kiryandogo to Kitgum.

(01 Marks)

b) Calculate the motorist average speed for the whole journey. ***(04 Marks)***

25. Study the isosceles triangle below and answer the questions that follow.

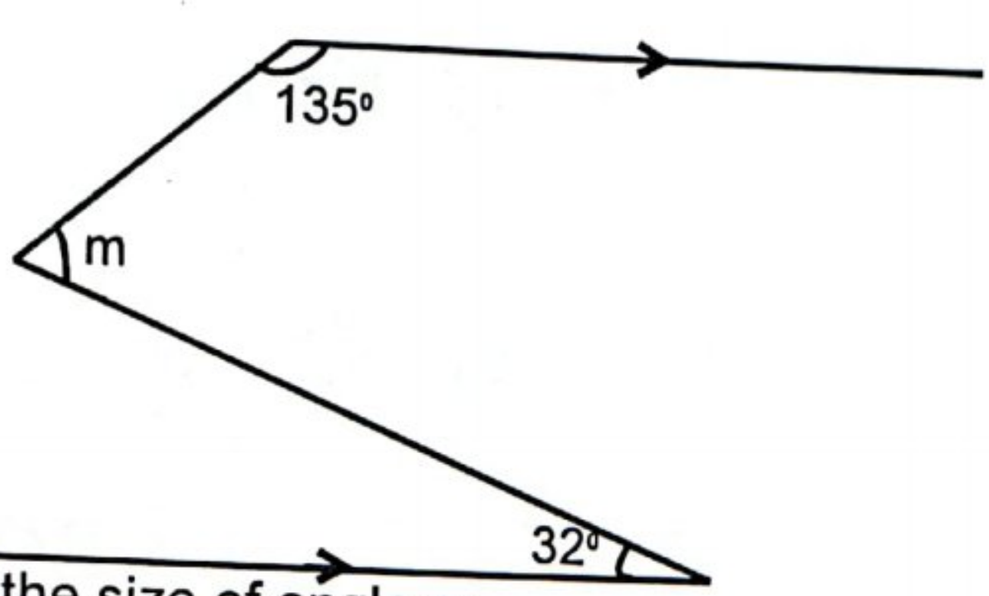


(a) Find the value of P ***(02 Marks)***

(b) Calculate the area of the triangle MNZ ***(03 Marks)***

26. The median of four consecutive odd numbers is 24. Find their sum ***(05 Marks)***

Study the parallel lines below and answer the question **27.**



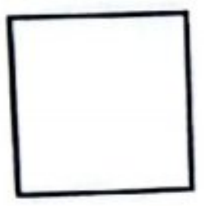
27.a). Find the size of angle m ***(02 Marks)***

b). The interior angle of a regular polygon is 100° more than its exterior angle. Find the size of the interior angle. ***(03 Marks)***

28. Suzy went shopping with twenty five thousand shillings and bought the following items as shown in the table below. Complete the table ***(05 Marks)***

Item	Quantity	Unit cost	Amount
Maize flour	2 kg	Sh.3400	Sh_____
Rice	1 kg	Sh_____	Shs 5250
Cooking oil	600 ml	Sh 5000 per litre	Sh_____
Sugar	_____kgs	Sh 3100 per kg	Sh_____
Total			**Sh 21250**

29. (a). Using a pair of compasses , a ruler and a sharp pencil only, construct a quadrilateral PQRS where PQ = 5.5cm, QR = 5 cm and angle SPQ = 60^0 ***(04 Marks)***



(b). Find the perimeter of the figure ***(01 Marks)***

30. Paul is 4 times as old as Jane. Phillip is 20 years older than Jane. The total age of Jane and Phillip is equal to Paul's age.

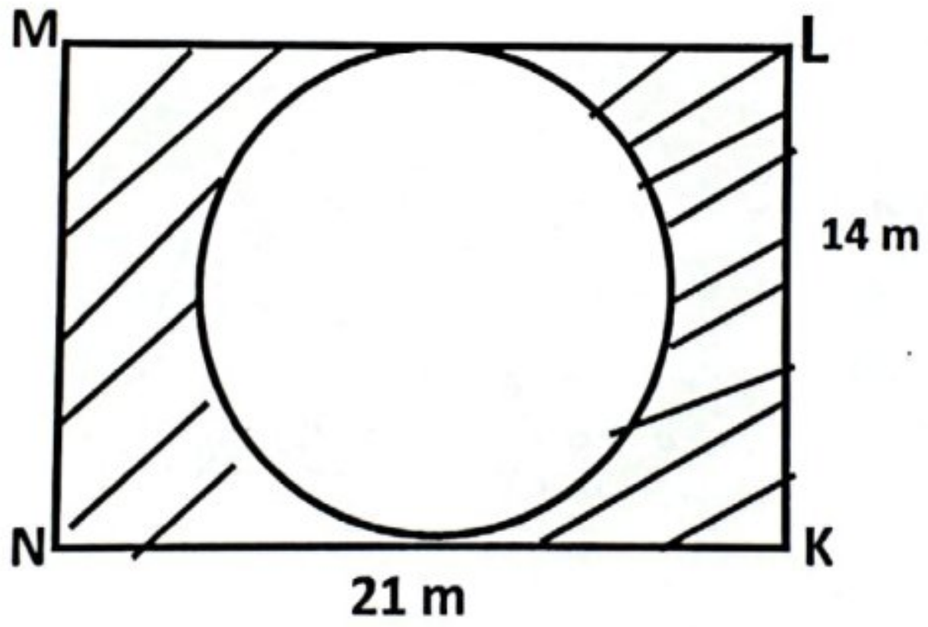
a). Find the age of Paul

(03 Marks)

b). Find the value of base n, if $21_n = 13_{ten}$ ***(02 Marks)***

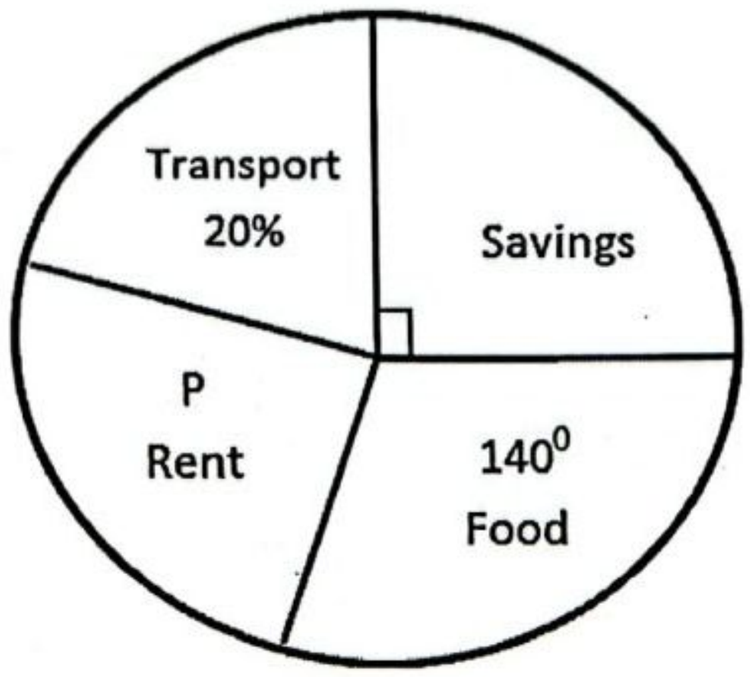
31. Study the figure below and then answer the question that follows.

Given that MN =14m and NK =21m ***(05 Marks)***



Calculate the area of the shaded part of the figure below

32. The circle graph below shows lady Liz's monthly savings and expenditure. Study it carefully and answer the questions that follow



(a). Find the value of P in degrees

(03 Marks)

(b). If lady LIZ spent shs164,000 more money on food than on rent, Find her monthly income.

(02 Marks)

END