THE REPUBLIC OF UGANDA

MASINDI MUNICIPAL COUNCIL ACADEMIC BOARD

MOCK EXAMINATION, 2023

MATHEMATICS

Time allowed: 2 hours 30 minutes

Index Number: | | | | | | | | | | |

Candidate 's Name: .....

Candidate 's Signature:.....

School Name:.....

District Name:.....

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.

Read the following instructions carefully:

1. This paper has **two** sections: A and B.
2. Answer **all** questions. All answers to both sections **A** and **B** must be written in the spaces provided.
3. All answers **must** be written using a blue or black ball-point or fountain pen. Diagrams should be drawn in pencil.
4. No calculators are allowed in the examination room.
5. Unnecessary changes of work may lead to **loss** of marks.
6. Any handwriting that cannot easily be read may lead to **loss** of marks.
7. Do not fill anything in the boxes indicated: **"For Examiners ' Use only"** and those inside the question paper.

FOR EXAMINER'S USE ONLY		
Qn. No	Marks	Exrs, 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)

For question 1 - 20, each question carries 2marks

1. **Work out:** 9 9

   - 4 4

   _____

2. Set k has 16 subsets . How many members are in set K?

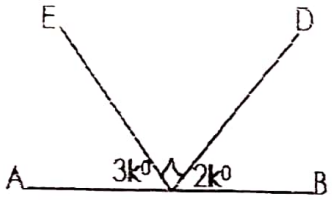
3. Express 36km/hr to metres per second.

4. Work out 3 - 4 =_____(finite 5)

5. Express $(3 \times 10^3) + (9 \times 10^0)$ as a single numeral.

6. Convert 14_{ten} to binary base.

7. Find the size of angle EBC.

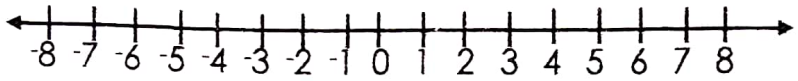


8. Solve for P: $4 - \frac{p}{2} = 8$

9. By selling a note book at sh.3500, Alice realized a loss of sh.1200. Find the cost price.

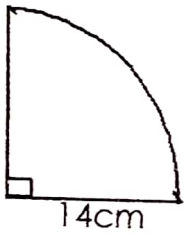
10. Work $2^4 + 3^0$

11. Multiply -2×3 using a number line.



12. Express 7092 in standard form.

13. Find the perimeter of the figure below. (Take $\pi = \frac{22}{7}$)



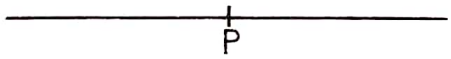
14. Use distributive property work out: $(93 \times 8) - (48 \times 8)$

15. Find the sum of the next two numbers in the sequence.
42, 31, 24, 19, _____, _____

16. The bearing of your school from Masindi municipal council is 0450. What is the direction of Masindi municipal council from your school?

17. Write in figures: Three hundred three thousand two hundred six.

18. With help of a pair of compasses, a pencil and a ruler only construct an angle of 75^0 at **P**.



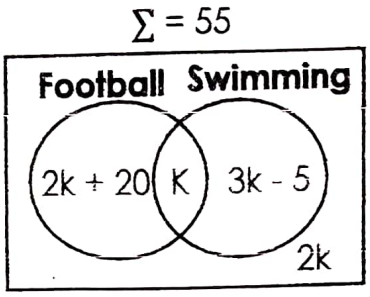
19. Given that a = 3, b= -2 . Evaluate $b^3 - a^2$

20. Multiply 0.3 x 0.7

SECTION B: (60 Marks)

Marks for each question are indicated in the brackets.

21. Study the Venn diagram below and answer the questions that follows.



a). Given that 40 people do not like swimming find the value of **K**. ***(3marks)***

b). Find the probability of picking at random a person who like only footbail. ***(2marks)***

22.a). Express 0.1666.....as a common fraction. ***(2marks)***

b). **Simplify:** $\frac{0.12 + 5.4}{0.4 \times 0.03}$ **(2marks)**

23. Sarah, James and Paul shared some money in the ratio of 4 : 3 : 5 respectively.

a). If James got sh.60,000, how much money did Sarah get? **(3marks)**

b). How much more money did Paul get than Sarah? **(2marks)**

24. Musa is 5 times as old as his son Peter. If their total age in 7 years time shall be 50 years.

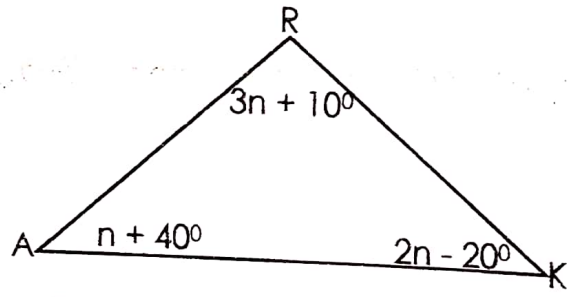
a). How old is Peter now? **(2marks)**

b). Find the difference between their ages in 7 years time. **(2marks)**

25.a). Using a pencil, a ruler and a pair of compasses only construct a triangle PQR in which PQ = 5cm angle QPR = 135^0 and QR = 9cm. **(4marks)**

b). Measure PQ in cm. **(1mark)**

26. Study the figure below and use it to answer the questions that follows.



a). Find the value of n. **(3marks)**

b). Calculate the size of angle AKR. ***(2marks)***

27. Town Q and town Y are located along a straight road. A taxi left town Q for town Y at 2:00pm travelling at an average speed of 60km per hour. At the same time a lorry left town Y for town Q travelling at an average speed of 40km per hour. If the two vehicles met at 3:30pm how far are the two towns?

28. Pauline had sh.50,00;0 note and bought the following items.

- 3kg of sugar at sh.5000 a kg.
- 2½ kg of maize flour at sh.4000 per kg.
- 30 oranges at sh.1000 for every 3.

How much money did she remain with if she was given a discount of sh.2000? ***(4marks)***

29. The table below shows marks obtained by candidates in maths monthly tests.

Marks	Taliy	Frequency	Totals
90	1	1	90
75	11	2	.....
45	.....	.....	180
.....	111	3	240

a). Complete the table correctly. **(3marks)**

b). Calculate the mean mark. **(2marks)**

30.a). Given that $1y01_{two} = 23^{five}$. Find the value of y. ***(3marks)***

b). If today is Thursday what day of the week will it be 47 days from now? ***(2marks)***

31.a). The interior angle of a regular polygon is half of it's interior angle. What is the size of each exterior angle? ***(2marks)***

b). Given that (y - 40) and (3y + 20) are supplementary angles. Find the size of the larger angle. ***(3marks)***

32. **Solve:**

a). $3(4y - 2) = 30$ **(3marks)**

b). $5m + 2 = m + 13$ **(2marks)**

End Good Luck & Success