



BUSOGA EXAMINATION COUNCIL

PRE-PLE EXAMINATION, 2024

MATHEMATICS (NAIROBI)

Time Allowed: 2 hours 30 minutes

Random No.						Personal No.		

Candidates' Name: _____

Read the following instructions carefully:

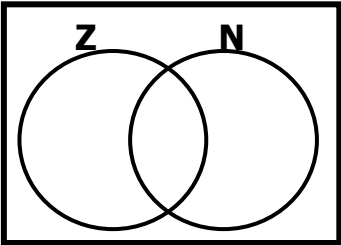
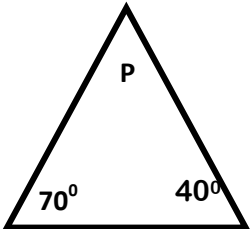
1. This paper is made up of section A and B.
2. Section A has 20 short answer questions (40 marks).
3. Section B has 12 questions (60 marks).
4. All answers to both section A and B must be written in the spaces provided.
5. All answers must be written in blue ink and diagrams should be drawn in pencil.
6. Any handwriting that cannot easily be read will lead to loss of marks.
7. Unnecessary alteration of work may lead to loss of marks.
8. No calculators are allowed in the examination room.

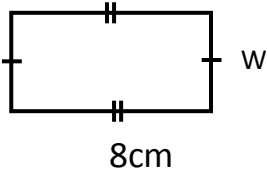
FOR EXAMINER'S USE ONLY

A	
B	
TOTAL	

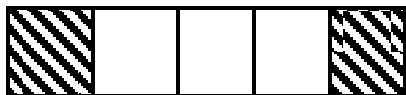
BUSOGA EXAMINATION COUNCIL

SECTION A (40MARKS)

1.	Work out: $\begin{array}{r} 8 \quad 6 \\ - 1 \quad 4 \\ \hline \hline \end{array}$	2.	Write "Four hundred five thousand eighty six" in figures.
3.	Solve for K : $\frac{2k}{5} = 10$	4.	In the Venn diagram below, shade set z complement. <div style="text-align: center;">  </div>
5.	Add: $\frac{2}{3} + \frac{1}{4}$	6.	Find the median of $-6, 2, 8, 3, 1$ and 0
7.	Work out the value of P in the figure below. <div style="text-align: center;">  </div>	8.	Expand 7345 using values.
9.	Simplify: $+6 - 4$	10.	Mr.Wekesa bought 100 litres of milk and sold them in quarter litres. How many quarter litres did he sell?

11.	Round off 32.46 to the nearest tenths.	12.	Given that half dozen of books cost sh.7200 . Find the cost of 8 similar books.
13.	Find the next two numbers in the sequence below. 2, 6, 12, 20, _____, _____	14.	The perimeter of a rectangle below is 24cm. Find its width 'W' 
15.	A bus covered a distance of 120km from Kampala to Masaka at an average speed of 40km/hr . How long did it take to reach its destination?	16.	If $x = 4 = y$, workout; \sqrt{xy}
17.	Given that set M has 4 elements. How many proper subbsets has set M ?	18.	Multiply: $24_{\text{five}} \times 3_{\text{five}}$

19. Find the percentage of the unshaded part in the figure below.



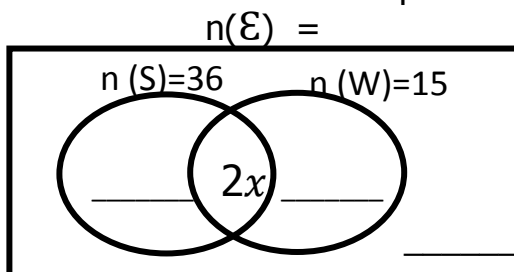
20. Given that $2x$ and 50° are complementary angles. Find the value of x .

SECTION B (60 marks)

(Marks for **each** question are indicated in the **brackets**.)

21. At a birth day party attended by 48 guests, 36 guests took soda (S), 15 guests took water (W), $2x$ guests took both water and soda while 5 guests took neither of the two drinks.

- a) Use the above information to complete the Venn diagram below. **(3marks)**



- b) How many guests took both drinks? **(3marks)**

22. Charlotte, Joan and Tetel shared some money in the ratio of 3:4:5 respectively.

- a) If they shared a total of sh. **144, 000**, how much did each get? **(3marks)**

b) Express Charlotte's shared as a percentage.

(1mark)

23. a) Using a pair of compasses, a ruler and a pencil only, construct a triangle MAP, where line **MA = 8cm**, line **AP = 6cm** and **MAP** is a right angle. (4marks)

b) Measure MP _____ cm.

(1mark)

24. a) Jannet went shopping and bought the items as shown in the table below. Study it carefully and complete. (4marks)

Item	Quantity	Unit price	Amount
Rice	3kg	sh.5000	sh._____
Sugar	2kg	sh. _____	sh.12000
Bread	_____ loaves	sh.3500	sh.10500
	Total	Expenditure	sh. _____

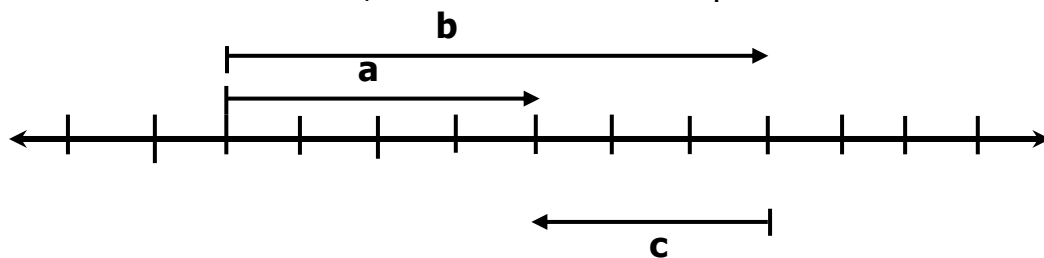
- b) If she went with 2 notes of twenty thousand shillings each, find her change. (2marks)

25. The sum of three consecutive counting numbers is 48. Find the numbers. *(4marks)*

26. a) Simplify: $\frac{1}{2} - \frac{1}{3} + \frac{1}{4}$ *(3marks)*

b) Work out; $\frac{0.18 \times 2.4}{0.12}$ *(3marks)*

27. Below is a number line, use it to answer the questions that follow.



a) Write down the integers represented by the arrows. *(1mark @)*

i) a = _____

ii) b = _____

iii) c = _____

b) Write the mathematical statement indicated on the number line above.

(2marks)

28. A taxi driver left Mpigi for Mbarara at **7:45am** driving at a steady speed of **60km/hr** for **4 hours**.

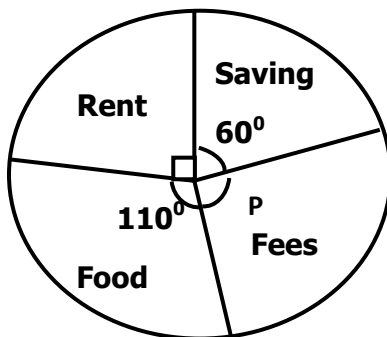
a) At what time did he reach Mbarara?

(2marks)

b) If he rested for an hour and drove back to Mpigi at a speed of 80km/h. Calculate his average speed for the whole journey.

(3marks)

29. The pie chart below show Mr. Osuku's monthly salary distribution of sh.720, 000



a) Find the value of **P**.

(2marks)

b) How much is spent on fees?

(2marks)

c) How much less money is spent on food than rent?

(2marks)

30. Kato is 20 years older than Juma. In 4 years to come, their total age will be 50 years. How old is each now?

(3marks)

31. At Kamuli Girls School-Kamuli , two bells are used to change lessons at an interval of 45 minutes and an hour for lower and upper primary respectively.

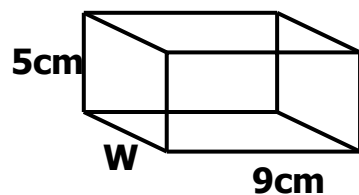
a) If they last rung together at **8:30a.m.**, after how many minutes will they ring together again?

(2marks)

b) At what time will they ring together again?

(3 marks)

32. The volume of a box below is **180cm^3** . Use it to answer the questions about it.



a) Find its width.

(2marks)

b) Workout its total surface area.

(3marks)

END