UNEB BLUE PRINT

2023

MATHEMATICS (SET SEVEN)

Time allowed: 2 Hours 30 Minutes

Index no:

Random No						Personal No		

Candidate's name: ……

Candidate's signature: ……

School: ……

District: ……

Read the following instructions carefully

1. This paper is made up of two sections: **A** and **B**.
2. Section **A** has **20**questions **(40 marks).**
3. Section **B** has **12** questions**(60 marks).**
4. Answer ALL questions in both sections **A** and **B.**
5. All answers **MUST** be written in the space provided In blue or black ball point pens or ink. All diagrams Should be in pencil.
6. Unnecessary crossing of answers will lead to loss of Marks.
7. Poor hand writing which cannot be easily read, May lead to loss of marks.

FOR EXAMINERS' USE ONLY		
Qn.No	**MARKS**	**SIGN**
1–10		
11–20		
21–22		
23–24		
25–26		
27–28		
29 – 30		
31 - 32		
TOTAL		

SECTION A (40 MARKS)

1. Workout: 201 + 21

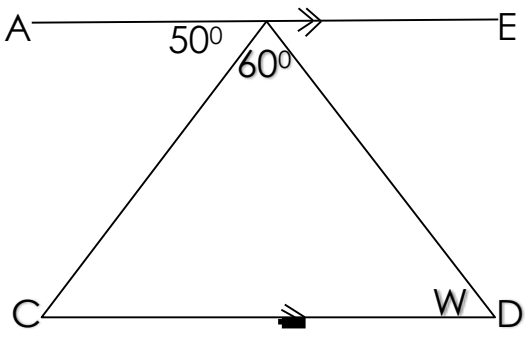
2. Write 49 in Roman numerals.

3. Find the next number in the series; 1, 4, 9, 16, _____.

4. How many pieces of string of 5cm can be obtained from a string of 2.5m**?**

5. The probability that Becky will pass Mock exams is 0.8. What is probability he will fail mock exams**?**

6. In the diagram below, AE is parallel top CD. Find the size of angle marked W.



7. Set R has 15 proper subsets, how many elements are in set R**?**

8. The temperature of Kisoro was -5^0C and then that of Mbarara was 27^0C. What is the difference in the temperature of the two places**?**

9. Change 123_{five} to decimal base.

10. Calculate the circumference of a circle whose diameter is 28cm.

11. Write "Eight hundred two thousand four" in figures.

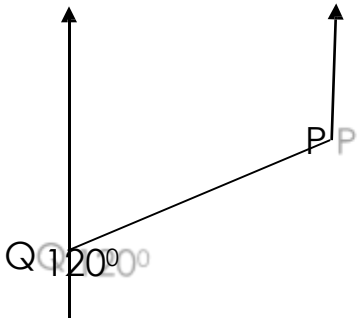
12. Work out (0.8 x 25) + (75 x 0.8)

13. Factorize completely 2ab – 4a.

14. The ratio of red pens to blue pens in the box is 2:3 respectively. How many red pens are in the box if there are 15 blue pens in the box**?**

15. Express 8000 in scientific form.

16. Find the bearing of Q from P. in the figure below.



17. Given that ⚽ stands for 25 balls. How many balls are represented by ⚽⚽⚽⚽?

18. The average weight of 5 pupils is 30kg when their teacher joins them, their teacher joins them, their average weight becomes 36kg. Find the weight of the teacher.

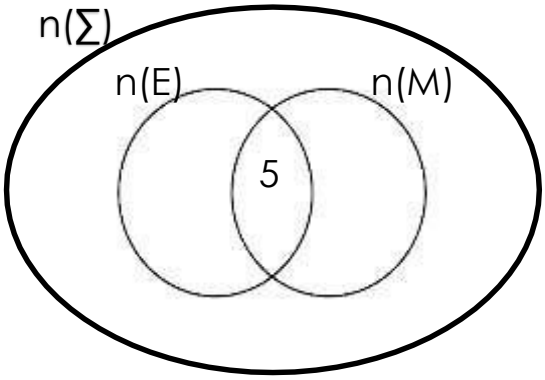
19. Akot covered a distance of 80km in only 45 minutes. Calculate the speed at which he was driving.

20. Solve $5 – 3(y – 1) = 17$

SECTION B (60MARKS)

21. In a class, 20 students passed English (E), (k+32) passed Maths (M) only, 5 pupils passed both subjects and (2k – 4) pupils failed both English and Maths.

a). Complete the Venn diagram below using the information above. (2mks)



b). Find the value of K if 16 pupils failed both subjects. (2mks)

c). How many pupils passed Maths**?** (1mks)

22. At a certain construction firm, three trucks A, B and C were used to deliver sand at intervals of 30minutes, 40minutes and 50minutes respectively.

a). After how long do the three trucks deliver at the same time**?** (3mks)

b). If they last delivered together at 10:30am. At what had they previously delivered the sand**?** (2mks)

23.The table below shows marks scored by a group of selected pupils.
a). Complete the table. (3mks)

Marks	No.pupils	Total
50		200
85	2	
	3	180
95		190
100	1	100

b). How many pupils scored marks above average**?** (2mks)

24. a). The diameter of a wheel of a motorcycle is 35cm. Find the number of revolutions the wheel makes to cover a journey of 33km. (2mks)

b). If the motorcyclist covers 110m per minute, how long will the journey of 33km take**?** (Give your answer in hours.) (3mks)

25. Mr. Okododiti went to Kumi supermarket and bought the following items.
    - 2kg of sugar at Shs8,000
    - 4 loaves of bread at Shs4,500 per loaf.
    - 6litres of milk at Shs1,500 per litre.
    - 500gms of tea leaves at Shs1,000.

If he went with a fifty thousand shillings note, calculate his change. (5mks)

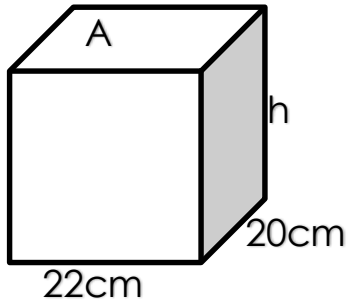
26.a). Musoke left town A at 6:30am and drove to town B at 80km/hr for 3 hours. He then continued to town C at 30km/hr for 2 hours. When did he reach town C**?** (2mks)

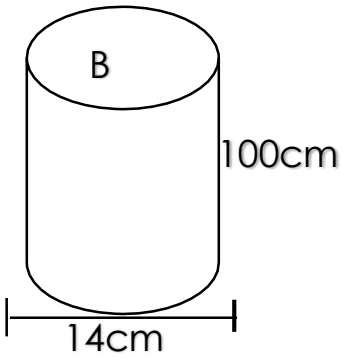
b). What was Musoke's speed for the whole journey**?** (3mks)

27.a). Simplify: $\frac{1.8 \times 2.4}{2.7+0.9}$ (3mks)

b). Write 5.68×10^{-2} as a single number (2mks)

28. The tanks below can hold the same amount of water when completely full. Study them with care and answer the questions that follow.





a). Calculate the value of h. (3mks)

b). How many litres of water does tank A hold**?** (2mks)

29.a). James is three times as old as Peter now. In 5 years time, the difference between their ages will be 30 years. How old is James now**?** (3mks)

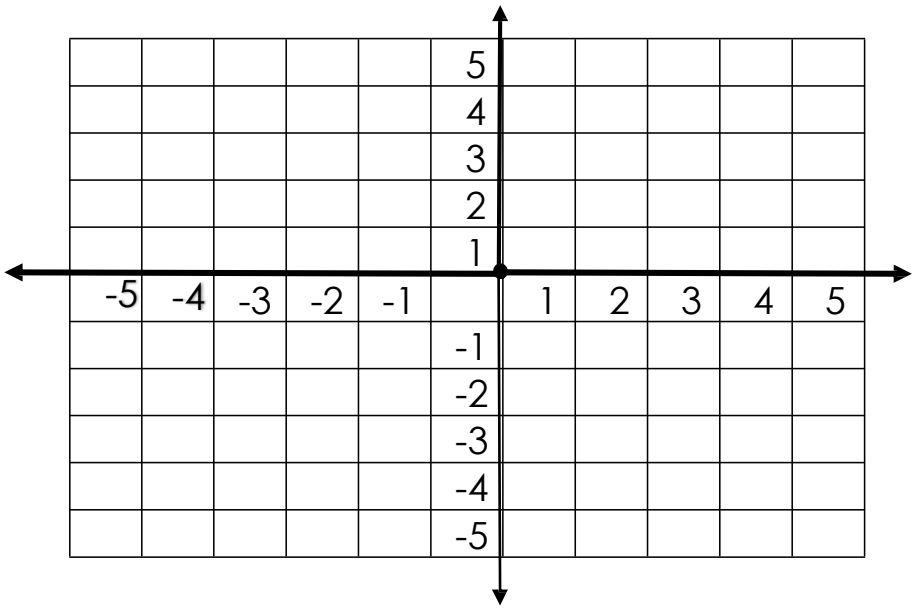
b). How old will Peter be in 25 years' time**?** (2mks)

30. Given that y = 2x + 1 complete the table below. (5mks)

X	3		$\frac{1}{2}$		0
Y		5		7	

31. Musoke deposited a certain amount of money in the bank which offers a simple interest rate of 5% per year. After 2 years, his account had an amount of Shs264,000. Calculate the money Musoke deposited. (5mks)

32.a). Plot **A**(-2, 3), **B**(2, 3), **C**(4, -3) and **D**(-4, -3) on the coordinate graph below. Join A to B, B to C, C to D and D to A (2mks)



b). Name the figure formed. (1mk)

c). Work out the area of the shape formed in square units. (2mks)