

STEM EXAMINATIONS BOARD

PRIMARY SEVEN ASSESSMENT SET VII, 2024

MATHEMATICS

Time Allowed: 2 hours 30 minutes

Index No.	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 8 printed pages altogether.
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 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.

Answer all questions in this section.

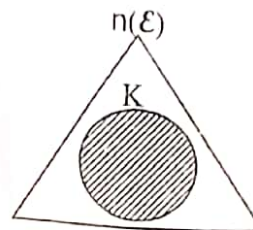
Questions 1 to 20 carry two marks each.

1. Divide: 27 by 3

2. Solve for y: $3y = 18 + y$

3. Express 302.7 in scientific notation.

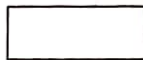
4. Describe the unshaded region on the Venn diagram below.



5. The angles $2t^\circ$ and $3t^\circ$ are supplementary. Find the value of t in degrees.

6. Write 199 in Roman numerals.

7. Edith banked notes worth Shs. 2000 each numbered from WP70084 to WP70193. How much money did she bank?



8. Calculate the mean of 9, $4n$, 11 and $8n$.

9. Use the dial below to work out;
 $3 - 4 = \underline{\hspace{2cm}}$ (finite 5)



10. Using a ruler, a pencil and a pair of compasses only, construct a line AP through point X parallel to line MN.



• X

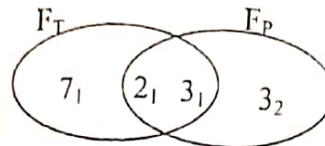


1. Find the next decimal number in the sequence below.
0.01, 0.04, 0.09, 0.16, _____

12. Work out:
$$\begin{array}{r} 1010_{\text{two}} \\ - 111_{\text{two}} \\ \hline \end{array}$$

13. Change 8.38km to metres.

14. Use the Venn diagram below to calculate the Lowest Common Multiple (LCM) of T and P.



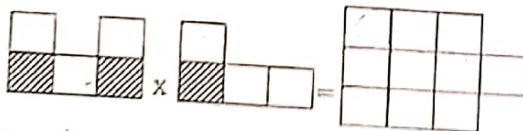
15. Work out:
$$\frac{0.08 + 0.64}{3.6}$$

16. The probability that John will pass this examination is $\frac{5}{8}$, what is the probability that he will fail it?

17. What time in the 12-hour clock system is 40 minutes before 1:30pm?

18. Simplify: $3y - 4 - (y + 4)$

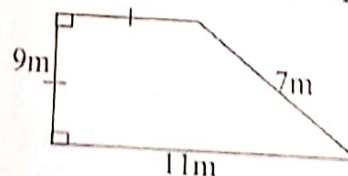
19. Work out;



$$\frac{2}{5} \times \frac{1}{2} = \frac{1}{5}$$

$$\frac{1}{10}$$

20. Calculate the area of the trapezium below.



SECTION B : 60 MARKS

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

21. The exchange rates at the forex bureau are as follows;

- (i) a US dollar (\$) costs Ug Shs. 3760.
- (ii) a Kenya Shilling (K.Sh.) costs Ug Shs. 30.
- (a) Convert Ug Shs. 940,000 to US dollars.

(2 marks)

(b) If a shirt costs 2500 Kenya Shillings, what is the equivalent cost of a shirt in Uganda Shillings?

(2 marks)

22. Complete the 3 by 3 magic puzzle below to find the values of w, x, y and z.

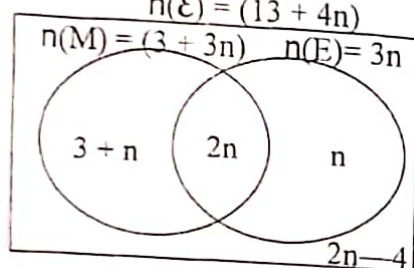
(5 marks)

w	x	y
14	z	10
9	16	11

23. A father and a daughter contributed Shs. 90,000 for a picnic in the ratio 3:2 respectively.
- (a) How much did each contribute?
- (i) Father (2 marks) (ii) Daughter (2 marks)

- (b) What percentage of the total amount did the daughter contribute? (2 marks)

24. The Venn diagram below shows number of teachers who teach Mathematics (M) and English (E), some teachers teach both subjects while 10 teachers teach other subjects.
- (a) Find the value of n . (2 marks)

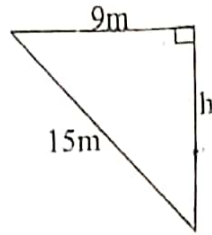


- (b) If a teacher is picked at random to become a head teacher, what is the probability of picking one who teaches one subject only? (3 marks)

25. (a) A school girl was facing office East wards. If she turned anti-clockwise to face South, through what angle did she turn? (2 marks)

- (b) Calculate the height (h) of the figure below.

(2 marks)

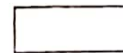
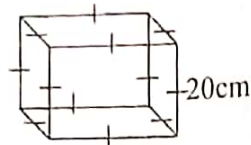


26. (a) Find the circumference of a circle whose radius is 14dm.

(2 marks)

- (b) Work out the capacity of a milk tank below in litres.

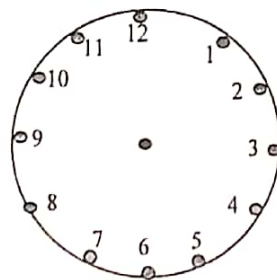
(3 marks)



27. A motorist left town at 8:45pm travelling at a speed of 80km/hr for $2\frac{1}{2}$ hours to arrive his home.

- (a) Show the arrival time to his home on the clock face below.

(3 marks)



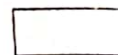
- (b) How far is the town from his home?

(2 marks)

28. (a) With the help of a ruler, a pencil and a protractor only, construct a triangle MTN such that angle MTN = 80° and line MT = TN = 7cm. (4 marks)

(b) Measure line MN.

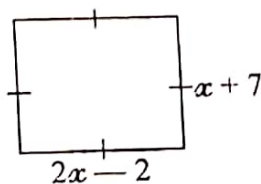
(1 mark)



29. (a) Increase 3080 litres of water by 20%. (2 marks)

- (b) Calculate the amount of money Annex will pay back on Shs. 125,000 borrowed for 3 years at a simple interest rate of 10% per annum. (4 marks)

30. (a) Solve for the value of x from the figure below. (2 marks)



- (b) Abdul is 53 years old while Tom is 18 years younger than Abdul.
 (i) How old is Tom? (1 mark) (ii) Find their total age. (2 marks)

31. (a) A wire 25km 40m was cut into 4 equal pieces.
 How long is each piece of a wire? (2 marks)

- (b) A bucket full of sand weighs 14.6kg. The weight of an empty bucket is 1.6kg.
 How many grams of sand are in the bucket? (2 marks)

32. The table below shows a Parent's monthly income expenditure.

S/No	ITEM	PERCENTAGE	AMOUNT
(i)	Food	35%	Shs. 42,000
(ii)	Rent	25%	Shs. 30,000
(iii)	Savings	y%	Shs. 48,000

- (a) Find the value of y. (2 marks) (b) Using a radius of 3cm, draw an accurate pie-chart to show the above information. (4 marks)