STEM EXAMINATIONS BOARD

PRE-PRIMARY LEAVING EXAMINATION SET VI, 2022

MATHEMATICS

Time Allowed: 2 hours 30 minutes

Random No.						Personal No.		

Candidate's Name: .....

Candidate's Signature: .....

District ID No: | | | | |

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

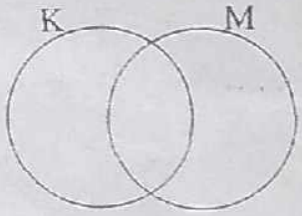
Answer **all** *questions in this section.*

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

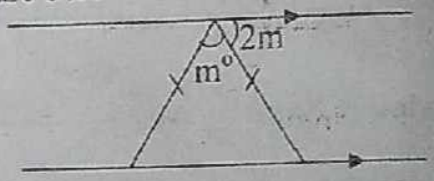
1. Work out: $32 - 10$

2. Find the next decimal number in the sequence below;
   0.01, 0.04, 0.09, ____

3. In the Venn diagram below, shade $(K \cap M)'$.



4. Solve for the value of m in degrees from the figure below.



5. What numeral has been expanded to get;
   $(4 \times 10^{2}) + (3 \times 10^{0}) + (7 \times 10^{-1}) + (3 \times 10^{-2})$

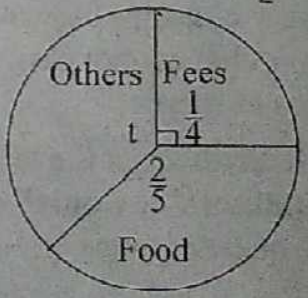
6. Divide: $1\frac{1}{2} \div \frac{3}{4}$

7. Simplify: $4k - 5m + 2k - 3m$

8. A fisherman saw a boat on water on a bearing of 080^{0}. What is the bearing of a fisherman from the boat?

9. Find the Greatest Common Factor (GCF) of 18 and 24.

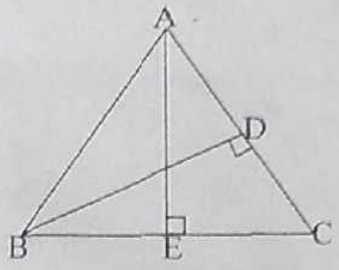
10. Calculate the value of t from the Pie-chart below.



11. 8 men can do a piece of work in 5 days. How many men can do the same piece of work in 10 days?

12. Use commutative property to complete the statement correctly;
$\square \times 7 = \square \times 11$

13. Calculate the height AE on the figure below. If AC = 20cm, BD = 8cm and BC = 16cm.



14. A team can win, loose or draw the game. what is the probability that a team will win the game?

15. By selling a radio at Shs. 25,000, John made a profit of Shs. 5000. What was the cost price of the radio?

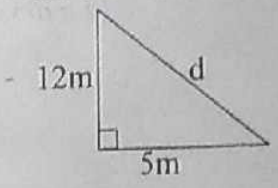
16. Subtract:

Weeks	Days
21	3
− 8	5

17. The exterior angle of a regular polygon is a half its interior angle. Work out the size of its exterior angle in degrees.

18. The price of a skirt was increased by 10% to Shs. 44,000. Calculate the original price of the skirt.

19. Find the value of d in metres.



20. Solve for $\square$: $3 - 6 = \square$ (finite 7)

Turn over

SECTION B : 60 MARKS.

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

Marks for each question are indicated in the brackets.

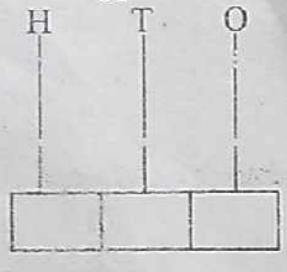
21. Given the digits 2, 0 and 3.

(a) Form the biggest and smallest 3-digit numerals using the digits above.

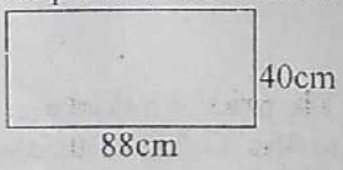
(i) biggest *(1 mark)* (ii) smallest *(1 mark)*

(b) Express the smallest numeral formed in scientific notation. *(2 marks)*

(c) Show the biggest numeral formed on the abacus. *(2 marks)*



22. A rectangular piece of metal below was folded to form a cylindrical tank.

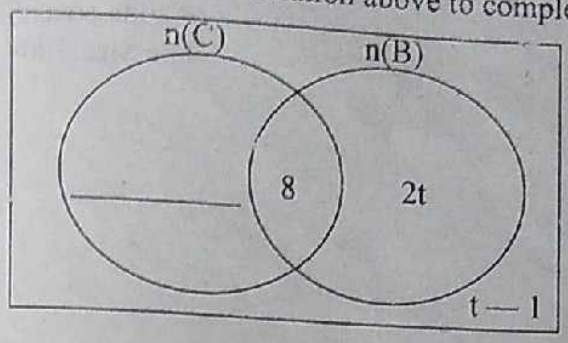


(a) Find the radius of the cylindrical tank that was formed. *(2 marks)*

(b) Work out the capacity of the cylindrical tank above. *(3 marks)*

23. At a gathering of women, 2t women ate beef (B) only, 50 women ate chicken (C), 8 women ate both chicken and beef while t — 1 ate neither of the two dishes.

(a) Use the given information above to complete the Venn diagram. *(1 mark)*



(b) If 11 women did not eat chicken, solve for the value of t. *(2 marks)*

(c) Find the total number of women in the gathering altogether. *(1 mark)*

24. (a) With the help of a ruler, a sharp pencil and a pair of compasses only, construct a quadrilateral PQRS where PQ = 6cm, angle PQR = 60^0 and QR = PS = 7cm. *(4 marks)*

(b) Drop a perpendicular bisector from R to meet PQ at X and measure RX. *(2 marks)*

Turn Over

25. At a birthday party, Joab served 72 bottles of sodas and x number of cakes. Each guest was served with 3 bottles of soda and 2 cakes.

(a) How many guests attended the party? *(1 mark)*

(b) How much money did Joab pay for the party altogether if a bottle of soda costs Shs. 1000 and a cake Shs. 500? *(3 marks)*

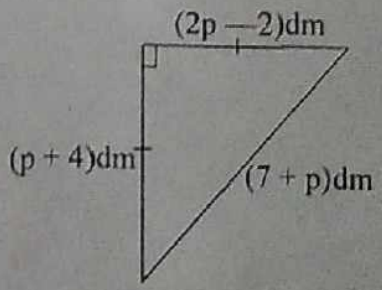
26. A motorist left home for town at an average speed of 80km/hr for 3 hours. He rested for an hour and then returned back home at a steady speed of 60km/hr.

(a) Find the distance between his home and town. *(2 marks)*

(b) Work out the motorist's average speed for the whole journey. *(3 marks)*

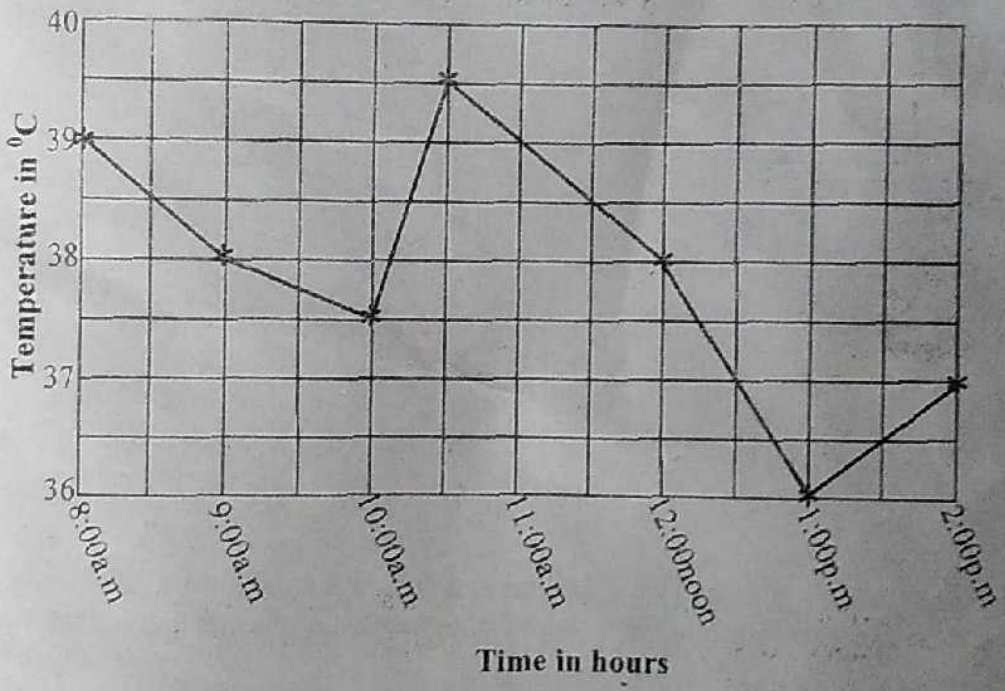
27. (a) Solve for y: $3(y + 4) = 24$ *(2 marks)*

(b) Calculate the total distance round the figure below. *(3 marks)*



28. Abdul has bank notes numbered from AP 004390 to AP 004489.
If each note is worth Shs. 2000 in value, increase the amount of money Adbul had by 20%.
(4 marks)

29. Use the graph below showing the temperature of a patient in a hospital to answer the questions that follow.



(a) What times of the day was the temperature of the patient the same?
(1 mark)

(b) Express the time in which most temperature was recorded in a 24-hour clock system.
(1 mark)

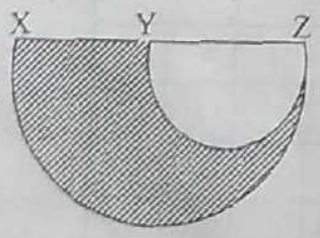
(c) Find the median of the temperature recorded on the graph above.
(2 marks)

(d) Work out the total temperature recorded for the patient.
(2 marks)

Turn Over

30. In a class, $\frac{1}{4}$ of the pupils like Science, $\frac{2}{3}$ of the remainder like Mathematics while the rest of the pupils like English. If those who like English are 45 pupils, how many pupils are in the class? *(5 marks)*

31. In the diagram below, XZ = 28m and YZ is half of XZ. Calculate the area of shaded part. [Take $\pi = \frac{22}{7}$] *(5 marks)*



32. The three sectors of a pie-chart care, savings and food are in the ratio 3 : 2 : 4 respectively. Using a radius of 4cm, construct an accurate pie-chart to represent the given information above. *(5 marks)*

END