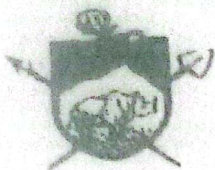


LIRA CITY EXAMINATIONS BOARD

MOCK EXAMINATIONS 2023

MATHEMATICS PAPER



TIME ALLOWED 2 HOURS 30 MINUTES



SCHOOL EMIS

PERSONAL NUMBER

INDEX No.

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CANDIDATE'S NAME:

CANDIDATE'S SIGNATURE:

SCHOOL NAME:

DIVISION:

Read the following instructions carefully

1. This paper has two sections A and B.
2. All the working for both sections A and B must be shown in the spaces provided.
3. All working must be done using a **blue** or **black ball-point pen** 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 be easily read may lead to loss of marks.
7. Do not fill any thing in the boxes indicated: "For Examiners" Use only.

FOR EXAMINER'S USE ONLY		
QN NO.	MARKS	EXR'S NO.
01-05		
06-10		
11-15		
16-20		
21-22		
23-24		
25-26		
27-28		
29-30		
31-32		
TOTAL		

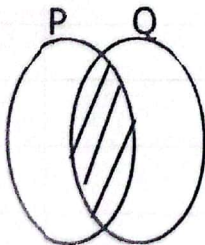
SECTION "A" (40 MARKS)

Work out: $239 - 109$

2. Write "three thousand thirty one" in figures

3. Simplify: $3ab + 2a - ab - 6a + 3a$

4. Describe the unshaded part in the diagram below.



5. A girl scored the following marks in a series of tests: 60, 45, 50, 60, 75, 80, 60 and 70. What was her modal frequency?

6. A mathematics lesson that started at 11:40am and ended at 1:00pm. How long was the lesson?

7. Evaluate $3\frac{1}{2} - 2\frac{1}{4} + \frac{1}{4}$

8. A trader bought 10 litres of cooking oil. He is to sell it in sackets of 250ml. How many sackets will he get?

9. Using a ruler and a pencil, draw a line segment AB which is 7.5cm long.



10. Find the sum of first 5 prime numbers



11. Expand 125.86 using powers of 10.



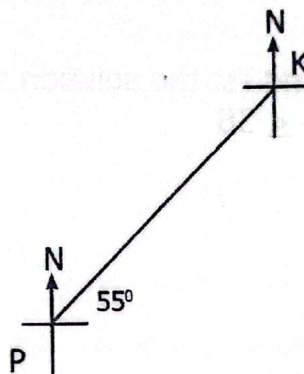
12. Simplify: $-5 - 7$

13. Work out $(72 \div 9) + (36 \div 9)$ using distributive properties

14. The mean of 14, $4a$, 18 and 12 is 15.
Find the value of a .

15. Usain Bolt runs 100m in 10 seconds
Express his speed in Km/hr.

16. Find the bearing of P from K

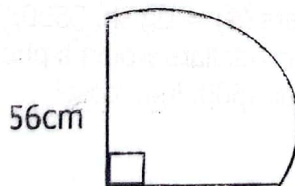


17. Given that 1ksh = Ugshs 35 and
1Us dollars (\$) = Ug sh. 3500,
How many dollars would a phone
bought at 45000Ksh cost?

18. There is enough food to last 20 days for 80 girls. How long will the same food last for 200 girls?

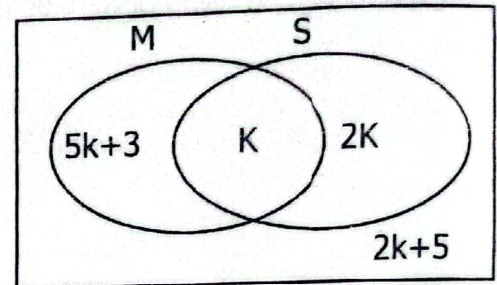
19. Solve and list the solution set for P.
 $14 - 3p \leq 38$

20. Workout the total distance around the figure below. (Take π as



SECTION B

21. The venn diagram below shows number of pupils who participated in mathematics contest (M) and spelling Bees (S). Use it to answer questions that follows.



If the number of pupils who participated in a competition is atleast thrice those who didnot participate in any. How many pupils participated in spelling Bee?

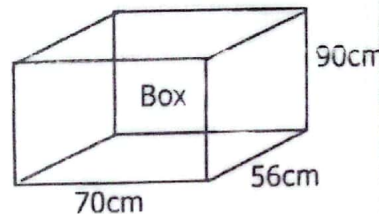
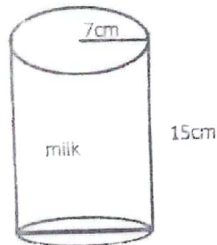
(5mks)

- 22a) **Work out:** $\frac{0.36 \times 0.12}{0.08 + 0.28}$ (3mks)

22b) Express 2.333..... as a rational number. (2mks)



23. Tins of milk measuring 7cm in radius and height of 15cm are to be packed in a box of length 70cm, width 56cm and height of 90cm.



a) How many layers will fill the box? (2mks)

b) Find the total number tins that will be packed in the first four layers. (3mks)

24a) Solve for n: $3^{2n} \times 3 = 243$ (3mks)

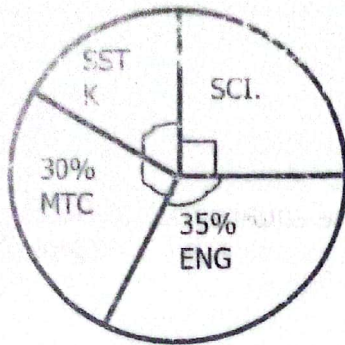
b) Find the square root of 0.25 (2mks)



25. A mother went to the market and bought the following items.
 2kg of rice at shs. 4000 per kg
 12 tomatoes at shs. 500 for every four tomatoes.
 2 litres of cooking oil at sh. 14,000.
 $5\frac{1}{2}$ Kg of beans at sh. 3,000 per kg
 If she was given a discount of 10% and she used shs. 5000 for transport,
 How much money did she returned with having gone with shs. 50000 note? (6mks)



26. The pie-chart below shows the subjects preference by pupils in P.7 class .



- a) Find the value of K. (2mks)

- b) If 50 pupils like Science, How many pupils are in the class? (3mks)

27. Moses did $\frac{1}{5}$ of his holiday package in week one, $\frac{1}{6}$ of the remainder in week 2 and the remaining 20 pages was done in the third week.

- a) What fraction was done in the third week? (2mks)

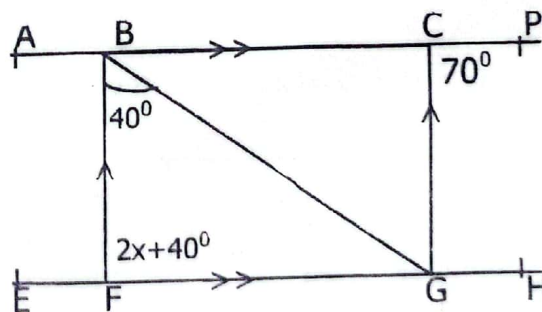
- b) How many pages was done in week one? (3mks)



28a) Using a ruler, a pencil and a pair of compasses only, construct a quadrilateral PQRS in which $PQ = 10\text{cm}$ and $QR = 5\text{cm}$. Angle $PQR = 120^\circ$. (4mks)

29. Mary is twice as old as his brother Peter and their father is twice Mary and Peter's age combined. If this total age is 90 years, how old is each of them now? (5mks)

30. In the diagram below, \overline{AP} is parallel to \overline{EH} . Line \overline{FB} is also parallel to \overline{GC} . Study it and use it to answer questions that follows.



b) Name the quadrilateral. (1mk)

a) Find the value of X. (2mks)

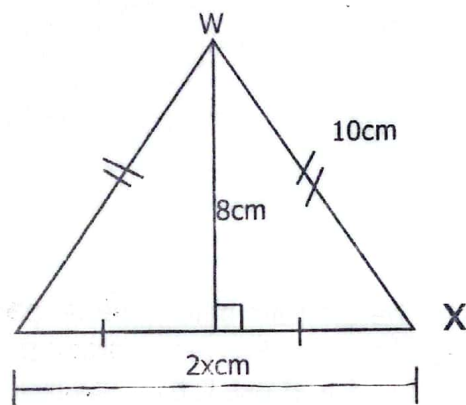


b) Calculate the size of angle BGF.

(3mks)

31. Work out the area of the figure below

(4mks)



32. Given that $y = 2x - 1$, complete the table below.

(1 mk each)

X	—	3	—	-1	-3
Y	5	—	7	—	—

