HILLSIDE PRIMARY SCHOOL

EXAMINATIONS
2023

MATHEMATICS (SET THREE)

Time Allowed: 2 Hours 30 Minutes

Index No.	Random No.						Personal No.		

Candidate's Name.....**Stream**.....

Candidate's Signature.....

EMIS No.....

District Name.....

Read the following instructions carefully:

1. The paper has **two** sections: **A** and **B**. Section A has 20 questions and Section B has 12 questions
2. Answer **all** questions. All answers to both sections **A** and **B** must be written in the spaces provided.
3. **All** working must be done using a blue or black ball-point pen or fountain pen. Any work written in pencil other than graphs and diagrams will not be marked
4. No calculators are allowed in the examination room.
5. Unnecessary changes in work may lead to loss of marks. Any handwriting that cannot easily be read may lead to loss of marks.
6. Do not fill anything in boxes indicated: **"For Examiners' Use Only"** and those inside the paper.

FOR EXAMINERS' USE ONLY		
Qn. No.	MARKS	EXRS' 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)

1. Work out: 94 – 45

2. Write in figures: **Eighty six thousand, ten**

3. Simplify 13x – 2(3x + 4)

4. Given that set K = {h, m, y, z}, find the number of subsets in set k

5. Work out: $^{-}8 - {}^{-}3$ on the number line below.

6. Find the sum of the 4^{th} and 9^{th} prime numbers

7. Work out: $\frac{12}{15} \div \frac{3}{5}$

8. A birthday party ended at 1:30p.m after lasting $1\frac{3}{4}$ hours. At what time did the party start?

9. How many lines of folding symmetry in the figure below?

10. A trader sold a pair of shoes at 44,800 making a profit of sh.1,800. What was the cost price of the pair of shoes?

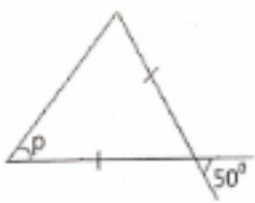
11. In a car park there are 288 cars. The probability that a car picked at random from the park is BMW is $\frac{5}{a}$. How many cars are not BMW type?

12. How many packets of 250 grams can be got from 3.5 kilograms of salt?

13. Given that a = ¯2 , b = ¯3 and c =4 , find the value of $b(a^2+ c)$

14. Work out: $111_{two} \times 11_{two}$

15. Find size of angle **p** the figure below.



16. Factorise completely: $8ab^2 - 12ab$

17. Find the median of the numbers: ⁻8, ⁻10, ⁻4, ⁻1, ⁻6 and ⁻9.

18. Wise has cows and rabbits in the ratio of 3:5. If he has 24 more rabbits than cows, how many ~~sheep~~ animals does he have?

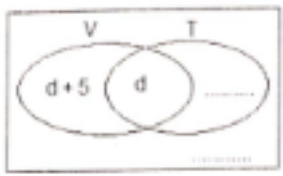
19. A can was $\frac{3}{4}$ full of water. When 9 litres were removed, it became $\frac{1}{4}$ full. What is the capacity of the can?

20. Find the square root of 1.21

SECTION B: (60 Marks)

21. In a class, 31 pupils play tennis (T) and (d + 5) play volley ball (V) only. d pupils play both games while 3 play neither of the games.

a) Use the above information to complete the Venn diagram below. (2marks)



b) If 23 pupils play volley ball altogether, find the value of d. (3marks)

22. a) What number has been expanded below? (3marks)

$(7 \times 10^{2}) + (2 \times 10^{-1}) + (5 \times 10^{0}) + (3 \times 10^{-2})$

b) Work out (9.7 x 64) - (9.7 x 14) (2marks)

23. The table below shows the rate at which different currencies were sold and bought in a commercial bank. Use it to answer the questions that follow.

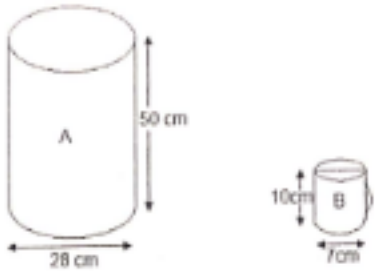
Currency	Buying in Ug. Sh.	Selling in Ug. Sh.
1 US dollar ($)	3,600	3,650
1Euro	4,100	4,250
1Rwandese franc	4.0	5.0

a) How many Euros can Paul get for Ug.Sh.1,020,000?
(2marks)

b) Alex came from Rwanda with 365,000 Rwanda Francs and exchange them for US dollar. How many US dollars did she get from the bank?
(3marks)

24. Betty filled container A below with drinking water, she served visitors with the water using cups of size B shown in the diagram. Find the total number of full cups of water she served the visitors (use $\pi = \frac{22}{7}$)

(6marks)



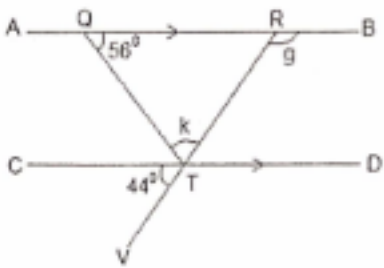
25. A fruit seller sold the following number of mangoes in six day: **60, 35, 40, 28, 42** and **35**.

a) What is the modal number of mangoes sold? (1mark)

b) Work out the mean number of mangoes sold. (2marks)

c) By the end of the seventh day, the mean number of mangoes sold was **45**. How many mangoes were sold on the seventh day? (2marks)

26. In the figure below line AB is parallel to CD, angle CTV $=44^0$ and angle TQR $= 56^0$. **Study** and **use it to answer the questions that follow.**



Find the size of;

a) angle k (2marks)

b) angle g. (2marks)

27. The table below shows how a motor cyclist travelled from town A through towns B and C to town D. Study and use it to answer the question below.

Town	Arrival	Departure
A		7:30 a.m
B	8:50 a.m	9:00 a.m
C	10:30 a.m	10:45a.m
D	1:00 p.m	

a) How long motor cyclist stay at town C? (1mark)

b) Find time the motor cyclist took to travel from town A to town D (2marks)

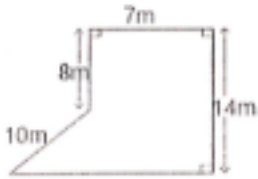
c) If the distance from town A to town D is 264km, calculate the average speed of the motor cyclist for the whole journey. (2marks)

28. After selling a radio at sh.72,000, a trader made a loss of 10%

a) Find the cost price of the radio. (3marks)

b) At what price must the trader sell the radio in order to make a profit of $12\frac{1}{2}$ % ? (3marks)

29. Study the figure below and use it to answer the questions that follow.



a) Calculate the area of the figure. (3marks)

b) Work out of the perimeter of the figure. (3marks)

30. Two taps P and Q are connected to water tank. Tap P can fill the tank in 3 hours while Q can empty in 4hours, one day when the tank was $\frac{1}{6}$ full of water, the taps were opened at the same time. How long did it take to fill the tank? (4marks)

31. A rubber costs a third as much as a book. A book costs sh.1200 more than a pen. If the total cost of the three items is shs.7, 900, find the cost of the pen.

(4marks)

32. Town P is 55km East of town G and town A is 70km from town G on a bearing of 225^0.

a) Using scale of 1cm represent 10km draw an accurate diagram to show the three towns.

(4marks)

b) Find the bearing ~~airport~~ town P from ~~airport~~ town A (1mark)

END