



# HILLSIDE PRIMARY SCHOOL

## EXAMINATIONS

2023

### MATHEMATICS (SET FIVE)

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		

1 Turn Over

### SECTION A: 40 MARKS

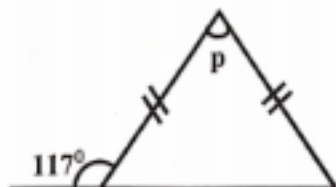
Answer **all** the questions in this section  
Questions 1 to 20 carry two marks each

1. Work out:  $17 + 121$ .
2. Write "Seventy eight thousand, seventy eight" in figure.
3. Find the common Factor of 15 and 27.
4. Given that  $B = \{q, r, s\}$ , how many proper subsets can be formed from set B.

5. Find the next two numbers in the sequence 8, 4, 2, 1, \_\_\_\_\_, \_\_\_\_\_

6. Round off 3.06 to the nearest tenths.

7. Find the size of the angle marked P in the figure below.



8. In a class, there are 20 boys and 10 more girls than boys. What is the ratio of boys to girls?

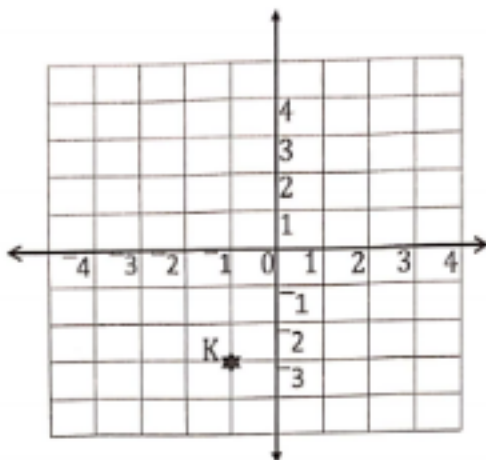
9. Simplify  $^{-}9 - 8$ .

10. Emmanuel bought a cock at sh.40,000 and later sold it Sh. 45,000. Find the percentage profit.

11. Work out  $104_{\text{five}} - 22_{\text{five}}$ .

12. In a box there are 5 black pens, 3 red pens and 4 blue pens. What is the probability of picking at random a red pen from the box?

13. Study the graph below.



i) Write the co-ordinates of point K

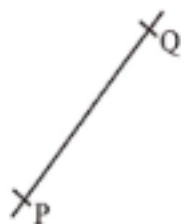
(01 mark)

ii) Plot the point M(0, +2) on the grid

(01 mark)

14. Convert  $0.2727\dots$  to a Common fraction.

15. The average mass of 3 boys is 24kgs, if the mass of the two boys is 50kg. Find the mass of the third boy.
16. Given  $a = bc$ ,  $b = 2$  and  $c = 3$ , find the value of  $c(a - b)$
17. Draw a perpendicular bisector on the line segment PQ



18. Use the distributive property to work out;  $(126 \div 3) + (27 \div 3)$ .
19. Mark is twice as old as Isaac, if their total age is 18years, how old is Isaac?
20. Five girls take 6 days to clear a Shamba. How many more days will 3 girls take to do the same piece of work, working at the same rate?

**SECTION: B (60 MARKS)**

*Answer all questions in this section.*

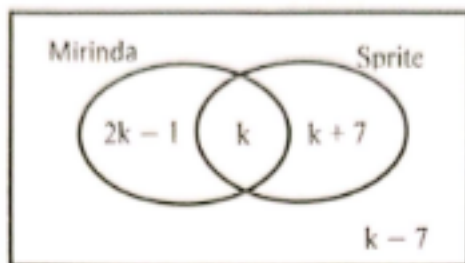
*Marks for each part of the question are indicated in the brackets*

21. a) Simplify:  $\frac{3}{4} - \frac{1}{5} + \frac{1}{2}$  (02 marks)

b) Work out:  $\frac{0.03 \times 2.4}{0.018}$  (02 marks)



22. The Venn diagram below shows the guests who attended a party and the type of soda they took.



- a) If 30 guests took only one type of soda, work out the value of  $K$ .  
(03 marks)
- b) How many guests altogether attended the party? (02 marks)

23.a) work out:

(02 marks)

$$\begin{array}{r} 1011_{\text{two}} \\ + 111_{\text{two}} \\ \hline \hline \end{array}$$

b) Given  $24_p = 102_{\text{four}}$ , find the base P.

(03 marks)

24.A car uses 6 litres of diesel to cover a distance of 120km.

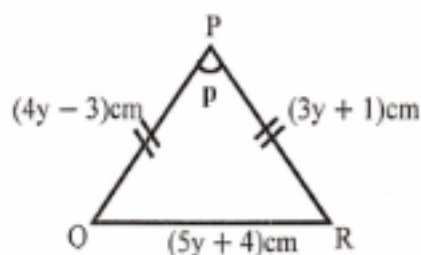
a) How many litres will be required to cover a distance of 40km?

(03 marks)

- b) If the cost of 1 litre of diesel is sh. 5,200, how much money will be needed to fuel the car to cover a distance of 40km?

(02 marks)

25. The figure below is an Isosceles triangle. Use it to answer the questions that follow.



- a) Find the value of  $y$ .

(04 marks)

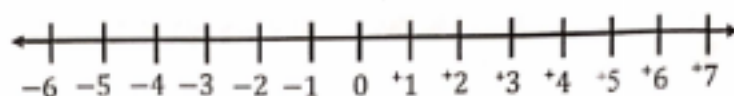
- b) Calculate the area of the triangle PQR.

(02 marks)

26.a) Subtract  $2 - 3 = \underline{\hspace{1cm}}$  (finite 5).

(02 marks)

b) Use a number line below to work out  $-2 - +5$ . (03 marks)



27.a) Using a ruler, pencil and pair of compasses only. Construct a triangle PQR where  $PQ=7\text{cm}$ , angle  $QPR=90^\circ$  and  $RQP = 45^\circ$ .

(04 marks)

b) Measure the length QR.

(01 mark)

28.a) Solve  $3(2p - 1) - 4(p + 3) = 1$ .

(02 marks)

b) Solve the inequality:  $6 + 3t < 15$

(02 marks)

29. Musa distributed some money to his children Liz, Lora and Lilly in the ratio 7:2:3 respectively.

a) If Lilly received sh. 9000, how much money did Musa distribute to his children? (03 marks)

b) How much money did Liz get?

(02 marks)

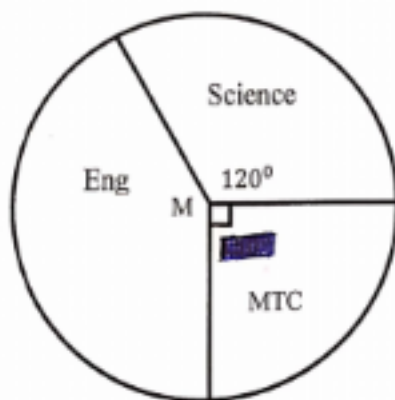
30. Study the shopping table below and complete it. (03 marks)

Item	Quantity	Unit cost	Amount
Rice	2kg	Sh. 3800	_____
Meat	_____	Sh. 12,000	Sh.18,000
Ingredients	500gms	_____	Sh.5000
Cooking oil	$\frac{1}{2}$ litre	Sh. 9000	Sh. 4500

b) How much did the customer pay for all the items, if he was given a discount of sh. 1100? (02 marks)

31. A motorist drives for  $3\frac{1}{2}$  hours at a speed of 60km/hr and a further 100km is covered in  $1\frac{1}{2}$  hour. Calculate the motorists average speed for the whole journey. (05 marks)

32. The pie chart below shows the number of books in the school library. Use it to answer the questions that follow.



a) Find the value of  $M$  in degrees.

(02 marks)

b) If there are 360 books for Science, find the total number of books in the library. (02 marks)

c) Express the Math books as a percentage of the total books in the library. (02 marks)

**END**