



HILLSIDE PRIMARY SCHOOL-NAALYA

PRE-REGISTRATION EXAMINATIONS

2023

MATHEMATICS (Set Four)

Time Allowed: 2 Hours 30 Minutes

Name.....Stream.....

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.
6. Any handwriting that cannot easily be read may lead to loss of marks.
7. 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

Answer **all** questions in this section.

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

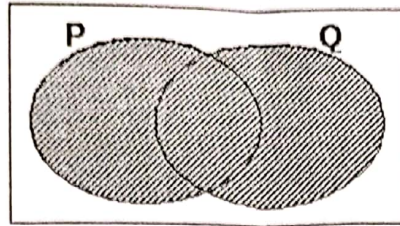
1. Multiply:
$$\begin{array}{r} 32 \\ \times 4 \\ \hline \end{array}$$

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

3. Write XCIV in Hindu Arabic numerals.

4. Express 42560 in Scientific notation.

5. In the Venn diagram below, describe the shaded part.

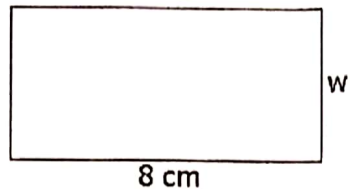


6. Work out: $(56 \div 7) - (14 \div 7)$

7. The complementary angle of $(3k - 20)^\circ$ is 50° . Find the value of k .

8. Convert 17_{ten} into a binary base.

9. The area of the figure below is 48 cm^2 . Find its perimeter.



10. Simplify: $-7 + -7$

11. Solve for x: $8x - 3 = 1$

12. A man bought 5 watches at sh. 25,000 and later sold each watch at sh. 6,000. Calculate his percentage profit.

13. Round off 1999 to the nearest hundreds.

14. Find the least number of pens that is given to 12 or 18 pupils leaving a remainder of 3 pens.

15. Given that $M = \{w, are, g, b\}$. Find the number of subsets that can be formed from set M.

16. With the help of a ruler, a sharp pencil and a pair of compasses only, construct an angle of 45° in the space provided below.

17. Work out: $3 - 4 = \underline{\hspace{1cm}}$ (finite 6)

18. A teacher wrote the ages of some pupils on the chalkboard as shown below;
12 years, 11 years, 12 years, 13 years, 14 years and 10 years. Find the
median age.

19. The cost of buying 9 apples is sh. 10,800. How many apples can one buy
with sh. 6,000?

20. Without dividing, show that 6,189 is exactly divisible by 3.

SECTION B: 60 MARKS.

Answer **all** questions in this section.

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

21. Margret went to the market and bought the items as shown on the table below. Complete the table. (05 Marks)

Items	Quantity	Unit price	Total cost
Meat	2 kg	Sh. 15,000	Sh. _____
Sugar	_____ kg	Sh. 4,000	Sh. 12,000
Rice	4 kg	Sh. _____	Sh. 24,000
Milk	$2\frac{1}{2}$ litres	Sh. 3,600	Sh. _____
	Total expenditure		Sh. _____

22. a) Work out: $\frac{2.4 \times 0.6}{0.8 \times 0.3}$

(03 Marks)

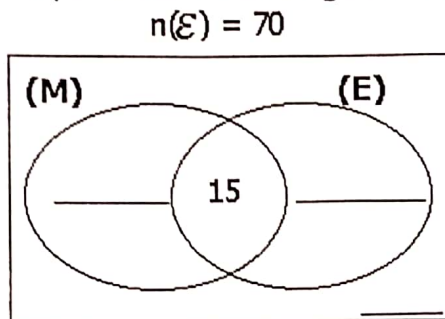
b) Simplify: $\frac{2}{3} - \frac{5}{6} + \frac{3}{4}$

(02 Marks)

23. In a class of 70 pupils, 40 like mathematics (M), 35 like English (E), 15 like both subjects while 2k pupils do not like any of the two subjects.

a) Complete the Venn diagram below.

(03 Marks)



b) Find the value of k.

(02 Marks)

c) How many pupils do not like English?

(01 Mark)

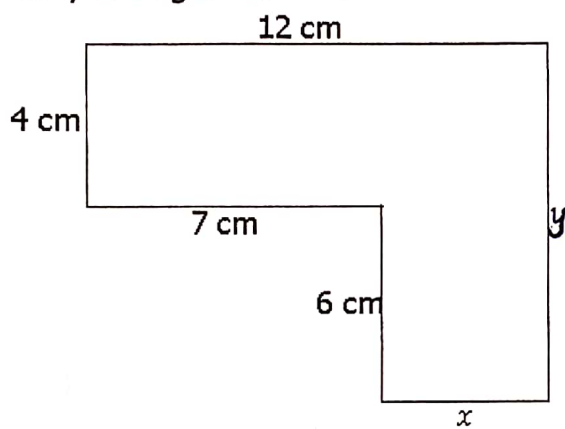
24. a) Express 144_{five} as a decimal base.

(02 Marks)

b) If $34_n = 22_{\text{ten}}$, find the value of n .

(02 Marks)

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



a) Find the value of x and y .

(02 Marks)

b) Work out the perimeter of the figure above.

(02 Marks)

c) Calculate its area.

(02 Marks)

26. Given the digits 4, 3 and 0.

a) Write all the possible 3-digit numbers that can be formed using the above digits. (04 Marks)

b) Find the sum of the largest and the smallest 3-digit numbers formed above. (02 Marks)

27. The table below shows the marks scored by some pupils in a mathematics test. Use it to answer the questions that follow.

Marks scored.	80	70	90	60
Number of pupils.	4	6	2	8

a) How many pupils did the test? (02 Marks)

b) Calculate the mean mark. (03 Marks)

28. A man deposited sh. 800,000 in the bank that offers an interest rate of 10% per year for 3 years.

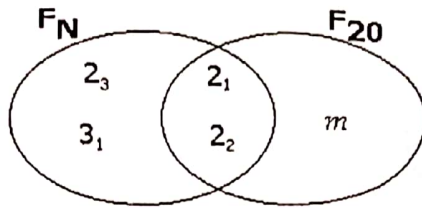
a) How much interest did he get? (02 Marks)

b) Calculate the amount of money in his account at the end of 3 years.
(02 Marks)

29. a) With the help of a ruler, a pencil and a pair of compasses only, construct a square ABCD where $AB = 7$ cm.
(04 Marks)

b) Measure the diagonal AC.
(01 Mark)

30. The Venn diagram below shows the prime factors of two numbers. Use it to answer the questions that follow.



a) Find the value of N . (02 Marks)

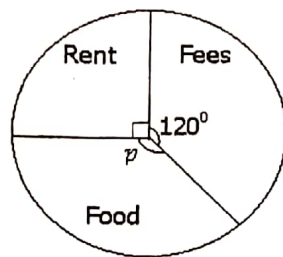
b) Work out the value of m . (02 Marks)

c) Calculate the HCF of N and 20 . (01 Marks)

31. When marking a test, a teacher awards 5 marks for every correct answer and deducts 2 marks for every wrong answer. A test contains 20 questions.
- a) A pupil got 18 correct answers, how many marks did he get? (02 Marks)

b) Racheal scored 65 marks. How many questions did she fail? (02 Marks)

32. The pie chart below shows how Mrs. Walumbe spends her monthly salary of sh. 1,440,000. Use it to answer the questions that follow.



a) Find the value of p .

(03 Marks)

b) How much more money does she spend on fees than food? (02 Marks)

END