HILLSIDE PRIMARY SCHOOL-NAALYA

PRE-REGISTRATION EXAMINATIONS

2024

MATHEMATICS (Set Two)

Time Allowed: 2 Hours 30 Minutes

Name: .... Stream: ....

Read the following instructions carefully

1. The 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** the working must be done using a blue or black ball-point pen or fountain pen. Diagrams must be drawn in pencil.

4. **Calculators** are not allowed in the examination room.

5. Unnecessary changes of 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 question paper.

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		

FOR EXAMINERS' USE ONLY

1

SECTION A: (40 marks)

1. Work out: $12 \div 3$ using repeated subtraction

2. Write **3013** in words.

3. Write XCV in Hindu Arabic numerals.

4. Given that set P has 32 subsets. Find n(P)

5. The area of a triangle is $42m^2$. If its base is 12m, calculate its height

6. The supplement of 5y - 20° is 50°. Find the value of **y**.

7. The cost of 4 pencils cost sh.2400. How many pencils can one buy with sh.3200?

8. Simplify: $2w - 8r - 7w + 5r$

9. Without dividing, show that 2346 is exactly divisible by 3

10. Change $\frac{3}{4}$ to a decimal

3

11. A lesson that ended at 4:10pm lasted 50minutes. At what time did it start?

12. Simplify: $^-4 + \, ^-6$

13. Increase 600kg by $22\frac{1}{2}\%$

14. Using a ruler, a pencil and a pair of compasses only, construct an angle of 120^0 in the space below.

15. Solve: $k + 5 = 2$ (finite 7)

16. Given that a = 2 and b = 3. Find the value of b^a

17. What is the smallest number that can be divisible by either 6 or 8 and leaves 3 as the remainder?

18. Draw a Venn diagram to show that all hens(H) are birds(B).

19. Solve: $5 - 2y = 13$.

20. Find the **square** of the next number in the sequence:
    4, 6, 8, 9, 10, _____

SECTION B: (60 marks)

21. a) Express 0.0542 in scientific notation. **(02 marks)**

b) Find the sum of the value of 3 and the value of 2 in the number 82531 **(03 marks)**

22. Pauline bought the items in the table below from a shop.
   a) Complete the table below. **(04 marks)**

Items	Unit cost	Amount
............bars of soap	Sh. 3,000per bar	Sh. 6000
3 loaves of bread	Sh. ....per loaf	Sh. 9600
$2\frac{1}{2}$ kg of salt	Sh. 800 per kg	Sh. ....
TOTAL EXPENDITURE		Sh. ....

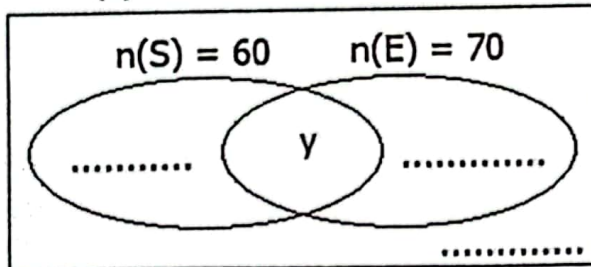b) If he was given a discount of 10%, how much money did he pay? **(01 mark)**

23. In a class of 120 pupils, 60 pupils like science (S), 70 like English (E) and y pupils like both Science and English while 5 pupils like neither of the two subjects.

    a) Complete the Venn diagram below.   **(03 marks)**

n(ε) = 120

n(S) = 60   n(E) = 70

....   y   ....

....

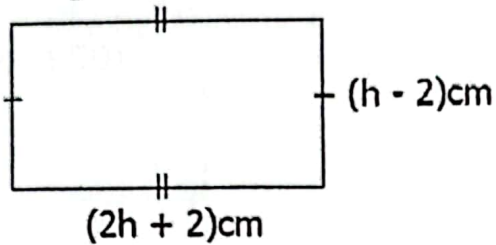   b) Find the value of y.   **(02 marks)**

24. a) Solve for m: $3(m-1) = 9$ **(03 marks)**

b) Tendo is two thirds as old as Dasha. If Tendo is (h) years old, find their total age. **(02 marks)**

25. The figure below is a rectangle. The distance around it is 36cm.

$(h - 2)$cm

$(2h + 2)$cm

a) Find the value of h **(02 marks)**

b) Calculate its area. **(03 marks)**

26. The sum of three consecutive counting numbers is 72.
    a) If the second number is y, find value of y. **(03 marks)**

    b) Write the first number in words. **(02 marks)**

27. Three boys; Anthony, Bernard and Christopher shared some apples in the ratio of 3:4:5 respectively. If Bernard got 120 apples,
    a) How many apples did they share altogether? **(03 marks)**

    b) Express Anthony's share as a fraction of the total share. (*01 mark*)

28. a) In a class of 600 pupils, $\frac{1}{3}$ of the pupils like Meat, 60% of the remainder like chicken. The rest of the pupils like Fish

   a) How many pupils like chicken? *(03 marks)*

   b) How many pupils like fish? *(02marks)*
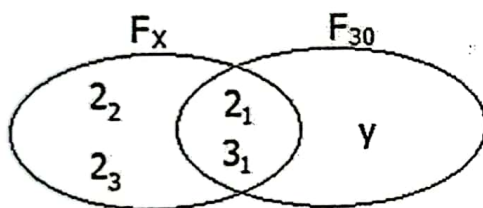
29. The table below shows the scores of a group of pupils in a class.

Marks	80	k	90	70
No. of pupils	2	3	1	4

   a) How many pupils did the test? *(02 marks)*

b) If the mean mark was 71, find the value of k.   (*03 marks*)

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

F_x F_{30}

2_2 2_1

2_3 3_1 y

a) Find the value of **x**.   (**02 marks**)

b) Calculate the value of y.   (**02 marks**)

c) Work out the LCM of X and 30. (02 marks)

31. a) Work out: $\dfrac{1.8 \times 0.15}{0.6 \times 0.3}$ (03 marks)

b) Express 0.3636 - - - as a fraction in its simplest form. (02 marks)

32. a) Using a pair of compasses, ruler and pencil only, construct a rectangle ABCD where line BC=9cm and line BA=5cm.   **(04 marks)**

b) Measure diagonal BD.   **(01 mark)**

END