HILLSIDE PRIMARY SCHOOL-NAALYA

EXAMINATIONS
2023
MATHEMATICS (SET SEVEN)
Time Allowed: 2 Hours 30 Minutes

Index No. | | | | | | | | | |

Candidate's Name.....

Candidate's Signature.....

EMIS No.....**Stream:** .....

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

1. Work out: $37 + 22$

2. Write 419 in Roman numerals.

3. Find the range of $\acute{5}$ and $\acute{2}$

4. Draw a Venn diagram showing $n(P \cap Q) = n(Q)$

5. Find the next number in the sequence.
   1, 2, 6, 15, 31, ___

6. What angle is $\frac{2}{5}$ of its supplement?

7. Round off 496.72 to the nearest tens.

8. What is the reciprocal of $\frac{3}{5}$?

9. Subtract 311_{four} from 330_{four}

10. Solve for P: $2p^2 - 1 = 31$

11. Lupai's clock is reading 3:00 o'clock. Find the size of the smaller angle between the hour hand and the minute hand.

12. Calculate the total surface area of a cube whose base area is 9 dm^2.

13. Using a ruler, pencil and a protractor only, construct an angle of 75^0

14. Subtract: $3 - 6 =$____ (finite 7).

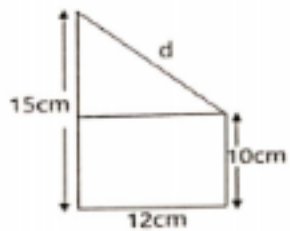
15. Increase 45 oranges by $66\frac{2}{3}\%$

16. 8 men can do a piece of work in 5 days. How many men can do the same piece of work in 10 days?

17. Given that set Q = {a, cow}. Find the number of subsets in set Q.

18. By selling a radio at Sh. 150,000. Oleja made a profit of sh. 50,000. What was the cost price of the radio?

19. Find the value of d.



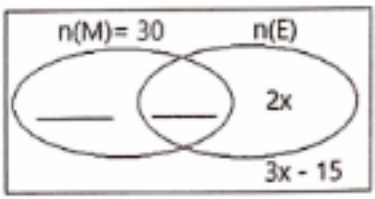
20. Simplify : 0.36 ÷ 6.00

SECTION B (60 marks)

21. In a class of 50 pupils, 30 like Mathematics (M), 20 like Mathematics only, 2x like English only while (3x-15) pupils like neither of the two subjects.

a) Show the above information on the Venn diagram below. **(2 marks)**

$n(\varepsilon) = 50$



b) How many pupils like English? **(3 marks)**

22. The electricity power metre reading at the beginning of the month was 2968432 units and 2969482 at the end of the month.

a) How many units were used during that month? **(2 marks)**

b) If each unit is charged at sh.1500, how much money is spent on all units used? **(3 marks)**

23. The exterior angle of a regular polygon is half of its interior angle.

a) Find the size of each interior angle. **(3 marks)**

b) Calculate the interior angle sum of the polygon. **(2 marks)**

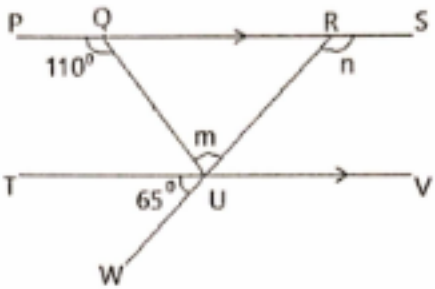
24. Adyeri went to the market and bought the following items.

- 3 litres of milk at sh. 2400 per litre.
- 2kg of sugar at sh. 1500 per 250g.
- $1\frac{1}{4}$ kg of meat each at sh. 16,000
- 18 oranges at sh.2000 for every 6 oranges.

a) Calculate his total expenditure. **(4 marks)**

b) If she paid sh.44,000 for all items, how much was her discount? **(1 mark)**

25. In the diagram below PS is parallel to TV. QRU is a triangle, angle TUW = 65^0 and angle PQU = 110^0. Study it carefully and answer the questions that follow **(5 marks)**



Find the size of;

i) angle m

ii) angle n

26. a) Using a ruler, a pencil and a pair of compasses only. Construct a rhombus KLMN in which KL = 6cm and angle KLM = 120^0. **(4 marks)**

b) Measure the diagonal LN. ..... **(1 mark)**

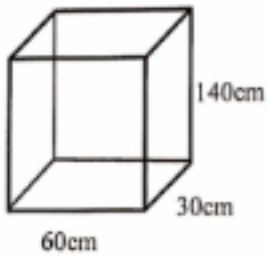
27. A motorist left town A for town B at an average speed of 80km/hr. for 3 hours. He rested for an hour and then returned to town A at a steady speed of 60km/hr.

a) Find the distance between town A and town B. **(2 marks)**

b) Calculate the motorists' average speed for the whole journey. **(3 marks)**

28. Three taps are connected to a tank. Tap M takes 6 hours to fill the tank, tap N takes 8 hours to fill the tank and tap L needs only 4 hours to draw water out the same tank. One day all taps were left open, how long did it take them to fill the tank? **(4 marks)**

29. Below is a rectangular container measuring 60cm by 30cm by 140cm.



a) Calculate the volume of the container **(3 marks)**

b) How many containers of milk measuring 5cm by 5cm by 5cm can be obtained from the given container above? **(3 marks)**

30. The sum of three consecutive even numbers is 30.

a) If the first number is m, find the value of m. **(3 marks)**

b) Find their range **(2 marks)**

31. a) Solve the equation: $\frac{3h-2}{5} + 6 = h + 2$ **(3 marks)**

b) Gerald is 8years younger than Bruce. Their total age is 24years. How old is Bruce? **(2 marks)**

32. The pie-chart below represents Mrs. Okello's monthly expenditure.

a) Calculate the value of n **(3 marks)**

b) If she spends sh. 240,000 on rent, find her total monthly expenditure **(2 marks)**

END