NATIONAL PRIVATE EDUCATIONAL INSTITUTIONS ASSOCIATION-(NPEIA)

EXAMINATIONS

END OF TERM I 2023

MATHEMATICS

PRIMARY SIX

TIME ALLOWED: 2HRS : 30 MINS

Name : _____

School : _____

Class : _____

Stream : _____

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO

<u>Read the following instructions carefully.</u>

1. This paper has two sections **A** and **B**. Section A has 20 questions and section B has 12 questions.

2. Answer **ALL** questions. 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 ink. Any working done in pencil other than graphs, pictures and diagrams will not be marked.

4. No calculators are allowed in the examination room.

5. Unnecessary changes of work may lead to loss of marks.

6. Any hand writing that cannot easily be read may lead to loss of marks.

7. Do not fill anything in the box indicated for 'Examiner's use only' and those inside the question paper.

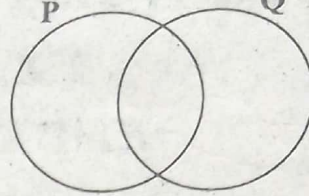1. Add: $\begin{array}{r} 3\ 4\ 1 \\ +\ 1\ 2\ 5 \\ \hline \end{array}$

2. On the Venn diagram below, shade set $P \cap Q$

3. Find the next two numbers in the sequence.

1, 3, 6, 10, ____ , ____

4. Think of a number and multiply it by four. The answer is 28. What is the number?

5. Arrange the following integers starting with the smallest.

-3, 0, +4, -6, 2

6. A farmer bought a goat at shs. 105,000 and sold it at a loss of shs. 11,000. How much did he sell the goat?

7. A church service which took 1 hour and 45 minutes ended at 12:00 noon. When did it begin?

8. Find the sum of the value of 6 and the place value of 0 in the number 34,106.

9. How many lines of folding symmetry has a kite?

10. The cost of 3 rulers is sh. 6,000. How many similar pencils can I buy with sh. 18,000?
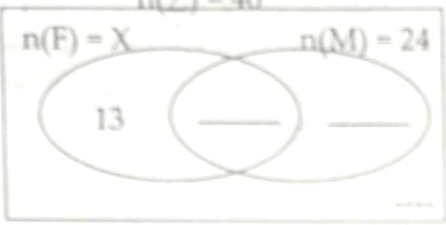
11. Given that represents 5 trees. In Mr. Muko's farm there are these trees.

If each tree was bought by a timber dealer at shs. 20,000, how much money did Mr. Muko receive?

12. The perimeter of a square is 40dm. Find the length of each side of a square.

13. Change $33\frac{1}{3}$ to an improper fraction.

14. Muko Dairy Corporation produces 456995 litres a day and Jesa farm produces 979995 litres of milk a day. How much milk do they produce altogether in one day?

15. List down all the factors of 18.

16. Lydia collected 80 litres of milk from her farm. How many half litre packets of milk did she collect?

17. Nantamu obtained the following marks in a series of tests;
15, 10, 25, 15 and 20. Calculate her range of marks.
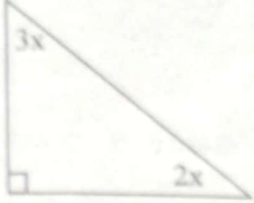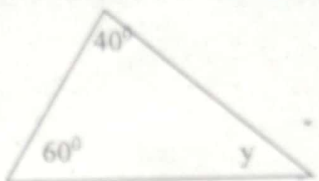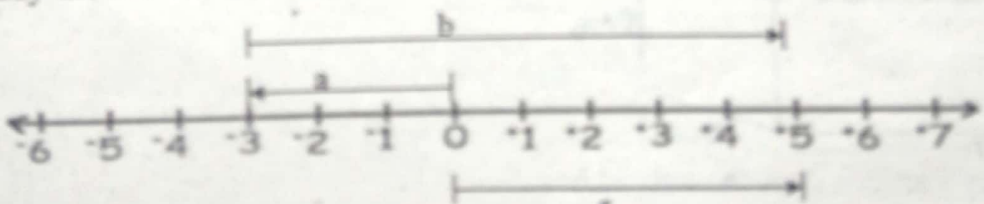
18. Find the square root of 64.

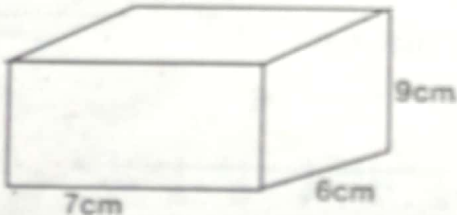| 19. Rose is 7 years old. Write her age into base five.	20. The time is eighteen minutes to noon. Write the time in figures.

SECTION B (12 QUESTIONS – 60 MARKS)

21. In a class of 40 learners, **X** like Fish (**F**), 24 like meat (**M**) and y learners do not like any of the two dishes. 5 learners like both Fish and Meat. (a) Complete the above Venn diagram	(3 marks)
 $n(\Sigma) = 40$ $n(F) = X$ $n(M) = 24$ 13 ___ ___	
(b) Find the value of y.	(2 marks)
(c) What is the probability that when a learner is picked at random from the class, the learner likes only one type of dish?	(2 marks)
22. Kamya went to the market and bought 10 sheep for shs. 650,000 and 5 goats for shs. 600,000. Which of the two types of animals was more expensive?	(3 marks)

23. Study the diagrams below and use them to find the values of the unknown. (4 marks)

a)

3x

2x

b)

40°

60° y

24. In a class of 240 pupils, $\frac{1}{4}$ of them are 9 years, $\frac{1}{3}$ are 10 years and $\frac{5}{12}$ are above 12 years. (2 marks)

(a) How many pupils are 10 years old?

(b) What is the difference between the number of pupils who are above 12 years and 9 years? (3 marks)

25. Study the number line and use it to answer questions. (3 marks)

b

a

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-6  -5  -4  -3  -2  -1   0  +1  +2  +3  +4  +5  +6  +7
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c

(i) Write down the integers represented by letters on the above number line.

a = _____   c = _____   b = _____

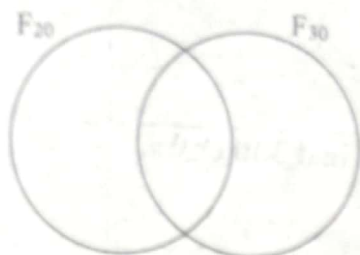(ii) Write down the mathematical sentence. (2 marks)

26.(a) Find the sum of all even numbers between 10 and 20   **(2 marks)**

(b) What is the smallest number of mangoes that can be shared among 12 or 8 pupils and one mango remains?   **(3 marks)**

27.(a) Using a ruler, pencil and a pair of compasses only, construct a regular polygon with 6 sides using a radius of 4cm.   **(4 marks)**

28. The figure below is of a cuboid.

9cm

7cm   6cm

(a) How many vertices does the cuboid have?   **(2 marks)**

(b) Work out the total surface area of the cuboid above.   **(3 marks)**

29. Ruth was asked to prime factorise 20 and 30.

(a) Represent her answers in a Venn diagram. **(3 marks)**

F_{20} F_{30}

(b) From the Venn diagram, find the GCF of 20 and 30. **(2 mark)**

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30. (a) Given that $x = 6$, $y = 4$ and $z = 3$. Work out the value of **(4 marks)**

(i) $3x + z$

(iii) $4(x + y)$

(b) Solve for g: $7 - g = 4$ **(2 marks)**

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31. Below is Mr. Okenen's shopping bill. Use it to answer the questions that follow.

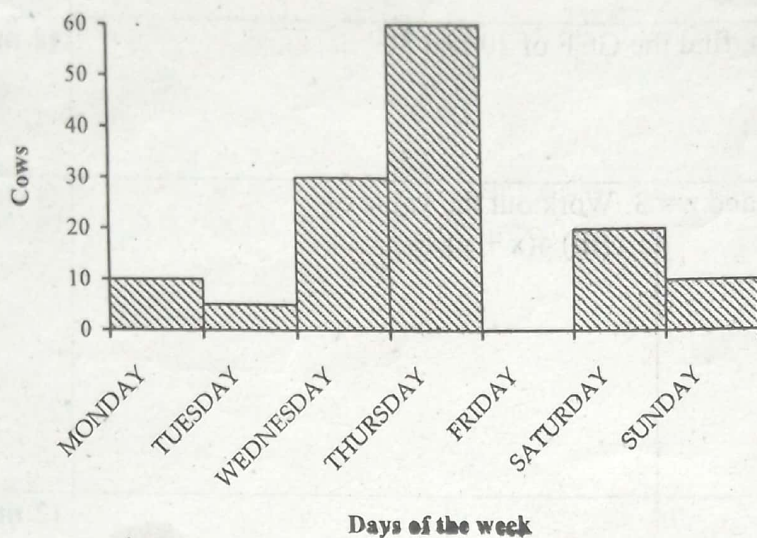| Item	Quantity	Unit cost	Total
Soap	3 pairs	Shs.	Shs. 2,400
Sugar	2kgs	Shs.	Shs. 6,400
Omo	sachets	Shs. 400	Shs. 1,600
Bread	3 loaves	Shs.	Shs.
Total Expenditure			**Shs. 17,000**

(a) Fill in to complete the table. **(5 marks)**

(b) If he had gone with shs. 50,000. Calculate his change. **(1 mark)**

32. The graph below shows the death rate of cows on a farm that had 360 cows.

Days of the week

(a) Which day had the highest death rate? **(1 mark)**

(b) Which day did not have any record of death? **(1 mark)**

(c) Work out the total number of cows that remained on the farm that week. **(3 marks)**

End

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