THE E-LEARN EXAMINATIONS BOARD

PRE NATIONAL MOCK 2024

SET TWO / FOUR

MATHEMATICS

Time Allowed: 2 hours 30 minutes

Index No.	EMIS No.						Personal No.		

Pupil's Name: .....

Pupil's Signature: .....

School Name: .....

District Name: .....

Read the following instructions carefully:

1. Do not forget to write your **school** or **district name** on the paper.
2. This paper has two sections: **A** and **B**. Section **A** has **20** questions and section **B**has **12** questions. The paper has **12** printed pages altogether.
3. Answer **all** questions. **All** working for both sections **A** and **B** must be shown in the spaces provided.
4. **All** answers **must** be written using a **blue** or **black** ball point pen or ink. Any work written in pencil will **not** be marked.
5. Unnecessary **changes** in your work and handwriting that cannot be read easily may lead to **loss of marks**.
6. Do not fill anything in the table indicated: **"For Examiners' use only"** and boxes inside the question paper

FOR **EXAMINERS' USE ONLY**		
Qn. No.	**MARKS**	**EXR'S NO.**
1 – 5		
6 – 10		
11 – 15		
16 – 20		
21 – 22		
23 – 24		
25 – 26		
27 – 28		
29 – 32		
TOTAL		

Turn Over

SECTION A: 40 *MARKS*

*Answer **all** the questions in this section.*

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

1. Work out: 77 + 33

2. Write in words: 45,024

   .....

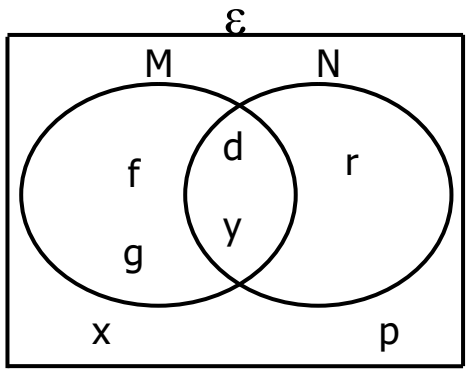
3. Write CDLXII in Hindu-Arabic numerals.

4. Work out using distributive property: (4×50) – (4×40)

5. Change 38_{ten} to base five.

6. Write 0.009 in scientific notation.

7. In the Venn diagram below, find $n(M \cap N)^{l}$.



8. A basket has 12 yellow and 4 green oranges. Find the probability of picking a green orange at random from the basket.

9. Find the expanded number: $(5\times10^{2})+(5\times10^{-2})$

10. Work out: 3 – 5 = p (finite 7)

11. Set Y has 64 subsets. Find n(Y).

12. An academic term started on a Monday and after 38 days, Midterm examination was written. On which day did the midterm examination start?

13. Work out: $\frac{1}{2}$ of 24 – (3 × 4) + 5

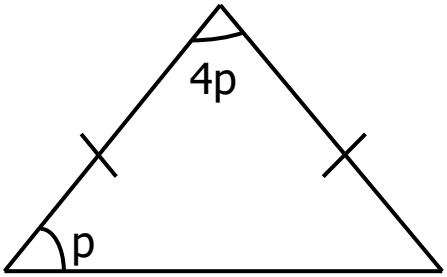
Turn Over

14. The LCM of two numbers is 180 and their GCF is 6. One of the numbers is 36. Find the other number.

15. With the help of a ruler and a pair of compasses only, construct an angle of 120^0.

16. Evaluate: $\frac{n^5 \times n^3}{n^6}$

17. In the diagram below, find the value of p in degrees.



18. It is 7:00 p.m. What time is on a 24 hour clock?

19. Think of a number, add 3 to it and triple the result, the answer is 24. What is the number?

20. Akello read a book from page 7 to page 16. How many papers did she read?

SECTION B: 60 *MARKS*

*Answer **all** the questions in this section.*

Marks for each question are indicated in brackets.

21. (a) Simplify: $\frac{3}{4} + \frac{1}{16} \div \frac{1}{4}$ *(02 marks)*

(b) Work out: $\frac{0.28 \times 3.6}{0.7 \times 0.6}$ *(02 marks)*

22. The sum of 3 consecutive even numbers is 24.

Find;

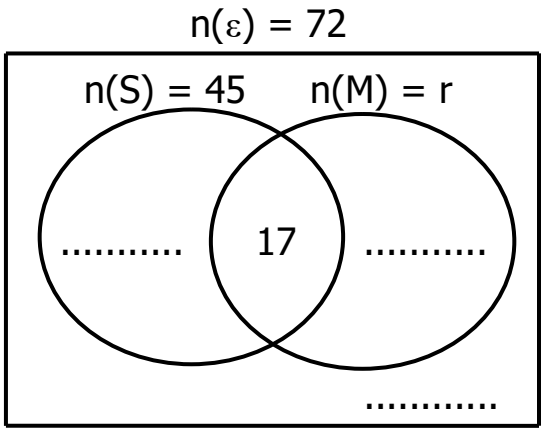
(a) the numbers. *(04 marks)*

(b) the product of the numbers. *(01 mark)*

Turn Over

23. A total of 72 guests were invited to a party. 45 guests were served with sodas (S), **r** guests were served with mineral water (M), 17 guests were served with both drinks while 7 guests did not turn up.

(a) Use the given information to complete the Venn diagram below. *(03 marks)*



(b) Calculate the number of guests who were served with mineral water. *(03 marks)*

24. A square piece of paper has an area of 2.25 square centimeters.

Find the;

(a) length of the paper. *(03 marks)*

(b) perimeter of the paper. *(01 mark)*

25. (a) Change 2012_{three} to base ten. *(02 marks)*

(b) Find the unknown base m: $43_m = 102_{five}$. *(03 marks)*

26. Below is Hilda's shopping list. Use it to answer the questions that follow.

Item	**Amount**
12 books	Sh 15,600
4 fountain pens	Sh 26,000
6 pencils	Sh 6,000

(a) Find the cost of one fountain pen. *(01 mark)*

Turn Over

(b) If Hilda had bought 7 books, how much would she have spent on books? *(02 marks)*

(c) Having paid for all the three items, Hilda remained with sh 2,400. How much money did she go with to the shop? *(02 marks)*

27. A man spent his salary as follows; $\frac{1}{4}$ on food, $\frac{1}{4}$ on rent and $\frac{1}{3}$ of reminder on others. He saved sh 270,000.

(a) What fraction of his salary did he save? *(03 marks)*

(b) Calculate his salary? *(02 marks)*

28. In a class of 58 pupils, all paid for a study trip. Each boy paid sh 45,000 while each girl paid sh 40,000. The sum of money paid by all girls was sh 1,280,000.

(a) How many girls are in the class? *(02 marks)*

(b) How much money did the boys pay altogether? *(02 marks)*

(c) How much money was paid by the whole class? *(02 marks)*

Turn Over

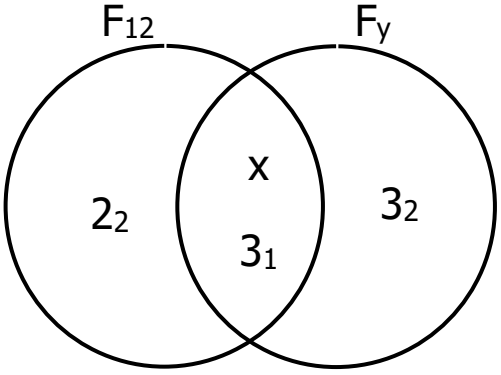
29. In a school, two bells for lower and upper school change lessons at intervals of 30 minutes and 60 minutes respectively.

(a) Every after how many minutes will both bells ring together?

(02 marks)

(b) If the bells ring together at 7:00 a.m. for the first time, at what time will they ring together for the third time? *(02 marks)*

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



(a) Find the value of;

(i) x *(02 marks)*

(ii) y *(02 marks)*

(b) Work out the LCM of 12 and y *(01 mark)*

31. The distance from Mbarara City to Kampala City is 290 km.

(a) At what speed did the driver use to cover the journey if he left Mbarara at 7:00 a.m. and reached Kampala at 12:00 noon?
(03 marks)

(b) On the return journey, the driver left Kampala at 5:00 p.m. driving at an average speed of 60 km/h. At what time did he arrive in Mbarara City? *(03 marks)*

Turn Over

32. (a) Using a ruler and a pair of compasses only, construct a triangle ABC in which side AB = 7 cm, angle CAB = 60^0 and side AC = 5cm. *(04 marks)*

(b) Drop a perpendicular line from vertex C to meet line AB at point **H**. *(01 mark)*

END