THE SIPRO MID-TERM II EXAMINATIONS -2024
PRIMARY SEVEN MATHEMATICS

Time Allowed: *2 Hours 30 Minutes*

Index No.

Random No.	Personal No.

Candidate's Name: _____

Candidate's Signature: _____

School Random No: _____

District: ID: _____

READ THE FOLLOWING INSTRUCTIONS CAREFULLY:

1. This paper has two sections: **A** and **B**.
2. Section **A** has **20** questions (**40 Marks**).
3. Section **B** has **12** questions (**60 Marks**).
4. Attempt all questions in both sections. All answers to both sections **A** and **B** must be written in the spaces provided.
5. All answers must be written in blue or black ball point pens or **ink**. Only diagrams and graph work must be done in **pencil**.
6. Unnecessary **alteration** of work will lead to loss of marks.
7. Any **handwriting** that cannot be easily read may lead to loss of marks.
8. Do not fill anything in the boxes indicated:
   "FOR EXAMINER'S USE ONLY"

Please turn over

SECTION A: 40 MARKS
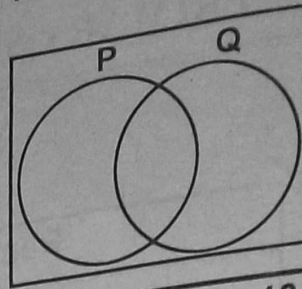*Attempt all questions in this section.*
Questions 1 to 20 carry two marks each.

1. Work out: $\begin{array}{r} 6\ \ 4 \\ -2\ \ 1 \\ \hline \end{array}$

2. In the venn diagram below, shade (P-Q)

P   Q

3. Work out: $\dfrac{2}{3} + \dfrac{1}{2}$

4. Change **2340** hours to **12** hour time clock system.

5. Write **6379.5** in power expanded form.
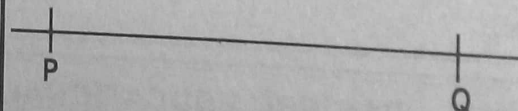
6. Simplify: $^-6 + {}^-9$

7. Given that **2b = 8**, a = $^-3$ and c = 4. Find the value of bc - a.

8. Use a ruler, a pencil and a pair of compasses only to construct a perpendicular line from point **B** to meet line **PQ** at **X**.

•B

P ———————— Q

9.	Write **CCIX** in Hindu-Arabic numerals.	10.	Work out the mean of 4p + 3,7,5, 2p and 15 + 4p.
11.	Mariam banked **20** consecutive notes of fifty thousand shillings. Find the first note if the last was numbered **AY6746586**.	12.	Given that set **M** = {a, b, c}; **List** all the subsets of set **M**.
13.	A trader has a bag of **25kg** of rice. How many packets of **250gm** does he need to pack the rice?	14.	The interior angle sum of a regular polygon is **720⁰**. Calculate the number of sides the polygon has.

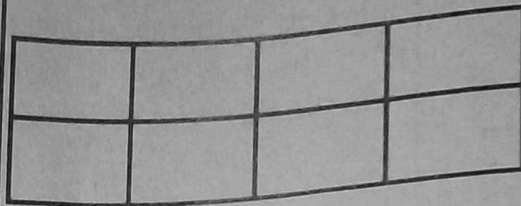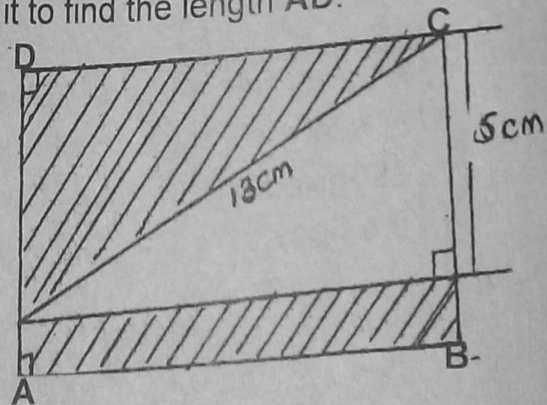| 15.	The ratio of 20 and **X** is 2:3 respectively of the two numbers. Find the Lowest Common Multiple of 20 and **X** if their **G.C.F** is 10.	16.	Work out the number whose **standard** form is 2.95×10^{-3}
17.	A car covered **144km** in 2 hours. Express the speed of the car in metres per second.	18.	Shade **25%** of the diagram.
19.	A trader sold two cocks at sh.**120,000** which he bought at sh. **45,000** each. Work out the percentage profit he made.	20.	The diagram below shows a triangle enclosed in a rectangle **ABCD**. Use it to find the length **AD**.

21.a) Use distributive property to work out: $(23 \times 18) + (18 \times 27)$ (02 marks)

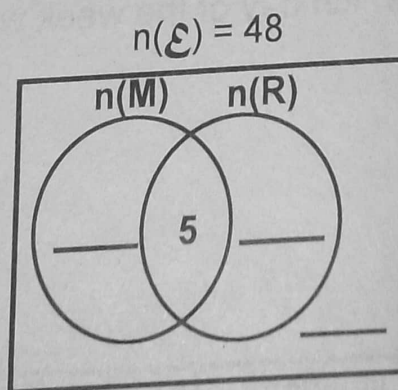**b)** Solve for **y** in $2^y \div 2^3 = 32$.   (03 marks)

22. In a class of **48** pupils, a third of the pupils eat Matoke (**M**) only, 3x pupils eat rice (**R**) only, **5** pupils eat both Matoke and rice while 3 pupils do not eat any of the two kinds of food.

a) Complete the venn diagram below using the above information.

(03 marks)

$$n(\mathcal{E}) = 48$$

n(M)   n(R)

____   5   ____

____

b) Work out the number of pupils who eat **rice**.   (03 marks)

4

23. Okumu spent $\frac{3}{5}$ of her salary on rent, $\frac{1}{4}$ of the remainder on food and saved **sh. 240,000.**
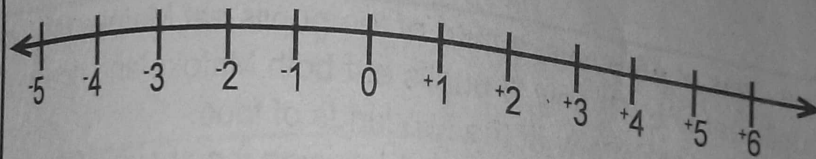
a) Find the fraction she saved.

(02 marks)

b) Calculate her **monthly** salary.

(03 marks)

24. a) Use the number line to **work out:** $^+6 - ^-2$.

(03 marks)

b) If today is Friday, which day of the week was it **28 days ago?**

(02 marks)

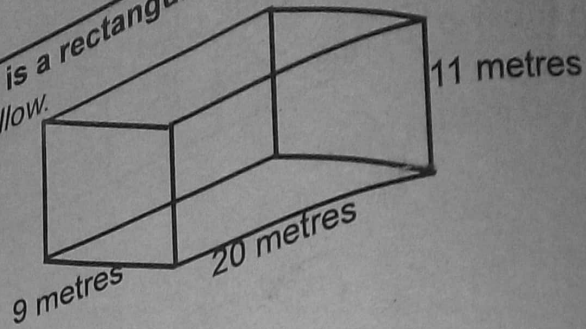**25. a)** Solve and write the solution set for y if $2(y-7) \leq 8$. *(03 marks)*

b) **Simplify:** $\frac{2}{3}(6x + 12) - \frac{1}{4}(8x + 12)$

(02 marks)

© Sipro Edu

26. The diagram below is a rectangular tank. Study and use it to answer the questions that follow.

9 metres   20 metres   11 metres

a) Find the sum of all the edges.   (02 marks)

b) Calculate its total surface area.   (03 marks)

27 a) Using a ruler, a pencil and a pair of compasses only, construct a rhombus **ABCD**, where line **AB** is 7cm, angle **ABC** is 120° and diagonal **AC** is 12cm.   (05 marks)

b) Measure AD = _____ cm.   (01 mark)

28. The table below shows marks scored and number of pupils who sat a special examination. Use it to answer the questions that follow.

Marks scored	90	80	75	60
Number of pupils	2	3	4	3

a) Find the **modal** mark.

(01 mark)

b) How many pupils scored **above** the average mark?

(03 marks)

29. The prime factors of **36** and **54** are given below;

$PF_{36} = 2^2 \times 3^2$

$PF_{54} = 2^1 \times 3^3$

Use the above prime factors to:

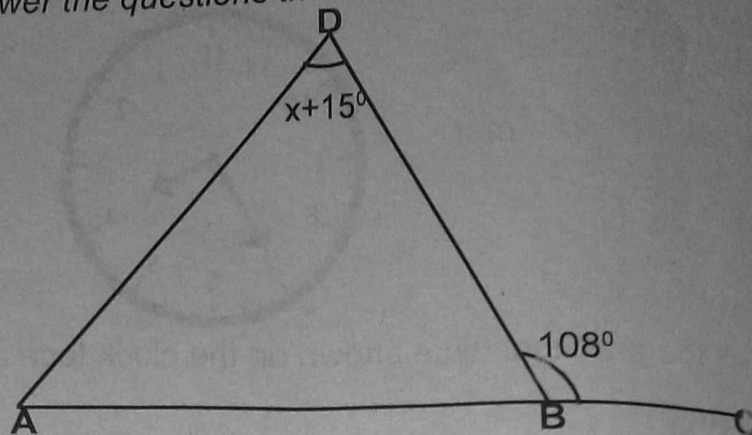a) Find the Greatest Common Factor (GCF) of 36 and 54.

(02 marks)

b) Work out the **LCM** of 36 and 54.

(02 marks)

30.	The diagram **ABD** is a triangle, line **ABC** is a straight line, angle **ADB** is X + 15⁰, angle **DBC** is 108⁰ and angle **DAB** is twice angle **ADB**. Study and *use it to answer the questions that follow.*

$$\angle D$$
$$x+15^0$$
$$108^0$$
$$A \qquad B \qquad C$$

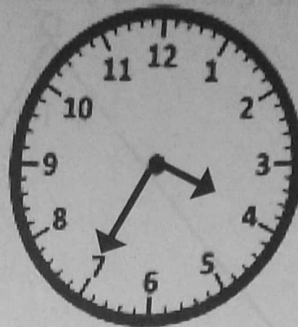|	a)	Find the value of **x** in degrees. *(03 marks)*	b)	Work out the size of angle **DAB**. *(02 marks)*

31.	The table below shows different denominations, number of notes and amount. *Study and use it to answer the questions that follow.* Complete the blank spaces.

Denominations	Number of notes	Amount
sh.5000	200 notes	sh._____
sh. 10,000	_____notes	sh.1,000,000
sh._____	50 notes	sh.1,000,000
sh.50,000	_____notes	sh._____
TOTAL		sh. 8,000,000

(05marks)

32. **Below is a 12 hour clock face.** *Study and use it to answer the questions that follow.*

a) Tell the afternoon time shown on the clock face above in a 24 hour clock system.

(02 marks)

b) If an activity that started at the time shown on the clock face above took 2 hours and 25 minutes, draw a clock to show the **ending** time of the activity.

(03 marks)