# THE SIPRO MID -TERM I EXAMINATIONS 2023

## PRIMARY SEVEN MATHEMATICS

**Time Allowed:** *2 Hours 30 Minutes*

| | Random No. | | | | | | Personal No. | | |
|---|---|---|---|---|---|---|---|---|---|
| **Index 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/crossing* 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"

| For Examiner's Use Only: | | |
|---|---|---|
| | | |

| PAGES | MARKS | INITIALS |
|---|---|---|
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| Page 9 | | |

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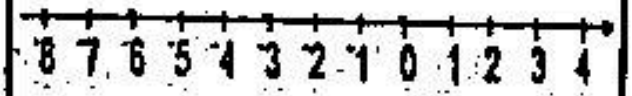
## SECTION A: 40 MARKS

*Questions 1 to 20 carry two marks each*

1. Work out:
$$\begin{array}{r} 8\ 6 \\ -3\ 0 \\ \hline \\ \hline \end{array}$$

2. Write 7,046 in words.

3. Represent -6 on the number line below.



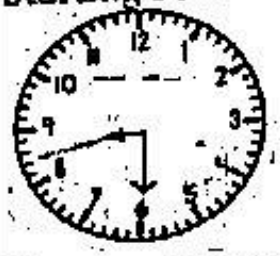
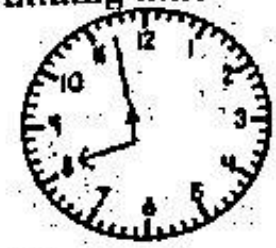

4. Given that ○○○ represents 6 eggs, draw pictures to represent 8 similar eggs.

5. Solve for h:
$9 + h = 13$

6. Using a ruler, a pencil and a protractor, draw an angle of 70°.

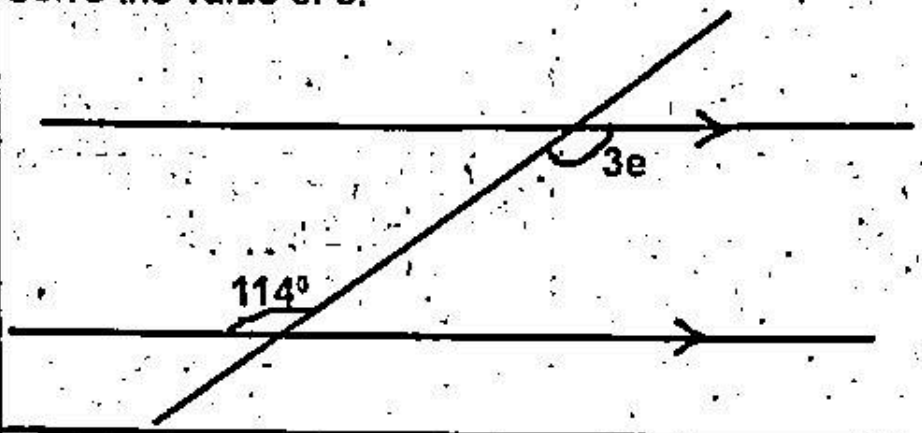
7. Work out: $1\frac{1}{2} + \frac{2}{4}$

8. Given that set V= {10, 20, 30, 40}
Find the number of proper subsets set V has.

| | | | |
|---|---|---|---|
| 9 | Ahimbisibwe has a mass of **0.61kg**. Express her mass in **grammes.** | 10 | If W = 3, U = 6 and P = 3. Evaluate $UW - P^3$ |
| 11 | What number has been expanded to get **(8x100,000) + (3x100) + (6x1)?** | 12 | Complete the sequence: **2, 3, 7, 16, 32, _____** |
| 13 | The Directors' meeting started and ended as shown on the clock faces below:<br>Starting time  Ending time  <br>How **long** was the meeting? | 14 | Find the **area** of a parallelogram whose base and perpendicular height are **9cm** and **7cm** respectively. |
| 15 | Express $\frac{3}{4}$ as a percentage. | 16 | Seven bottles of mineral water cost **sh 4200**. How much will one pay for 2 similar bottles? |

17 Work out: $1011_{two}$ + $101_{two}$

18 Solve the value of e.




19 Find the Lowest Common Multiple (L.C.M) of 18 and 16.

20 Change 180km/h to metres per second.

## SECTION B: 60 MARKS

*Marks for each part of the question are indicated in the brackets*

21 The table below shows Masika's expenditure. *Study it carefully and answer the questions that follow.*

a) Complete the table.

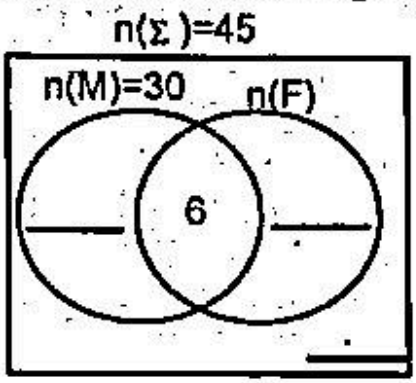
| Item | Quantity | Unit cost | Total cost |
|---|---|---|---|
| Peas | 3kg | sh.6000 per kg | sh. |
| Bread | 2 loaves | sh. _____ per loaf | sh. 8000 |
| Sugar | ..... kg | sh. 4000per kg | sh. 6000 |
| Rice | 500g | sh. _____ per kg | sh. 3600 |
| | Total | | sh. |

b) If she was given a change of sh 2400, how much did she have at first?

*(01 mark)*

22 In a class of 45 pupils, 40 like meat (M), 6 pupils like both meat and fish, Y pupils like fish (F) only and 5 pupils like none of two sauces.

a) Complete the venn diagram




*(03 marks)*

b) Find the value of y.

*(02 marks)*

23a) Using a ruler, a pencil and a pair of compasses only, construct a **rectangle XLMN** where XL = 7.0cm and LM = 4.0cm.

*(04 marks)*

| | | | |
|---|---|---|---|
| b) | Measure the diagonal line LN.<br><br>*(01 mark)* | | |
| 24a) | Express $9_{ten}$ to binary base.<br><br>*(02 marks)* | b) | Given that $30_{w} = 22_{five}$<br>Find the value of base W.<br><br>*(03 marks)* |
| 25a) | Okello, Akello and Alice shared **sh 270,000** in the ratio of **2:5:3** respectively.<br>Find the **sum** of money Okello and Alice got altogether.<br><br>*(03 marks)* | b) | Express the share of **Akello** as a fraction of the **total** amount.<br><br>*(02 marks)* |

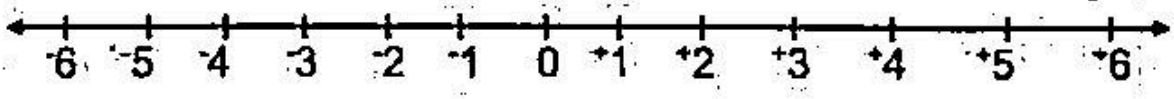
26a) How many degrees are in six revolutions?

(02 marks)

b) The three interior angles of a triangle are $40^0$, $2y^0$ and $90^0$ respectively. Find the value of y.

(02 marks)

27a) Work out $^+5 + ^-8$ using the number line below.

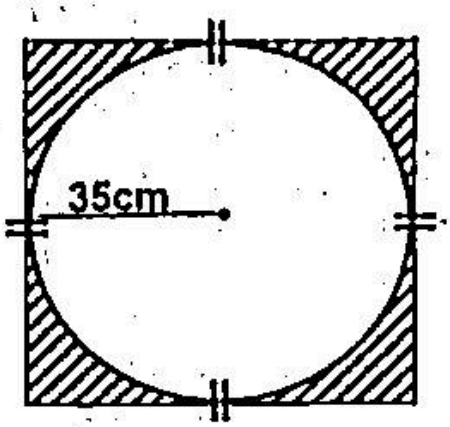



(03 marks)

b) The temperature of water was $39^0$c. After being put on fire, the temperature rose by $7^0$c. What is the new temperature of the water?

(02 marks)

28 The figure below is a **circle** inside a **square**. *Use it to find the area of the shaded part.*




*(05 marks)*

29a) Collect the like terms:

$8n + 7e - 3n - 10e$

*(02 marks)*

b) Solve for W.

$\frac{2w}{5} = 6$

*(02 marks)*

30 a) A cyclist travelled **2hours** at a speed of **10km/h** from home to town. The cyclist continued to the village at a speed of **15km/h** for **3** hours. How far is the town from home?

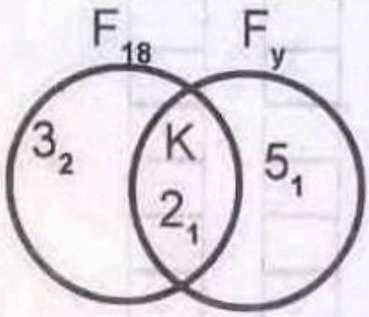
b) How far is the **village** from town?

*(02 marks)*

c) Calculate the **average** speed for the **whole** journey.

*(01 mark)*

31 Below is a venn diagram showing prime factors of two numbers. *Study it carefully and answer the questions that follow.*




a) Find the value of **K**.

*(02marks)*

b) Work out the Greatest Common Factor (**G.C.F**) of $F_{18}$ and $F_y$.

*(02marks)*

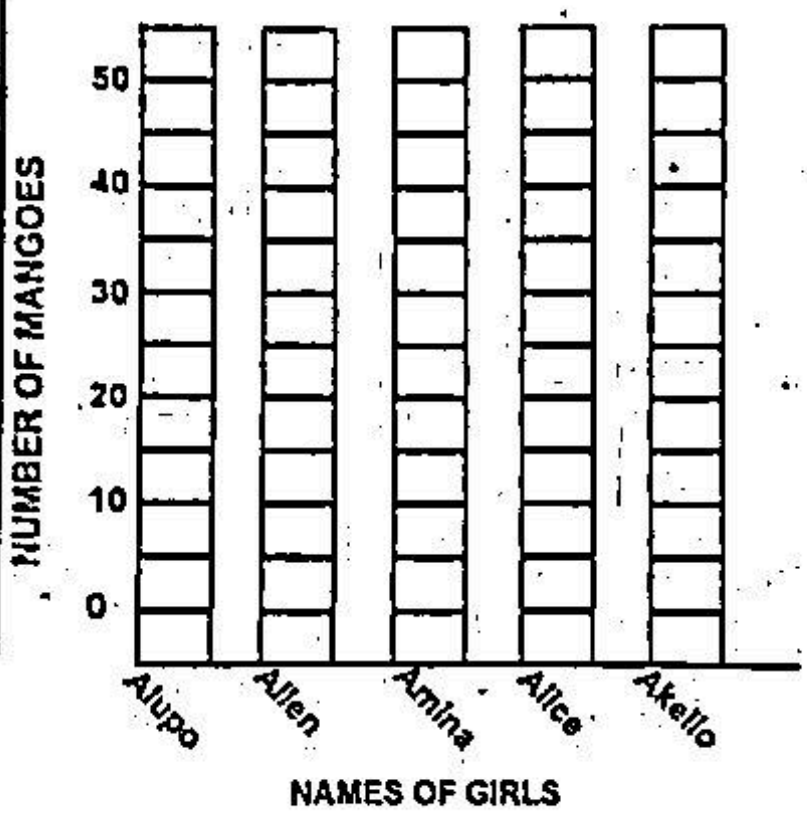
c) Calculate the Lowest Common Multiple (**L.C.M**) of the two numbers.

*(02marks)*

32 The table below shows the number of mangoes collected by five different girls.

| Names | Allen | Alice | Akello | Alupo | Amina |
|---|---|---|---|---|---|
| No. of mangoes | 35 | 40 | 20 | 45 | 50 |

Represent the above information on the bar graph below.




(05marks)