THE SIPRO P.7 PRE-MOCK - 2024

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** 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;

Qn No	MARKS	INITIALS
1- 5		
6 -10		
11-15		
16 -20		
21-22		
23 -24		
25-26		
27-28		
29 -30		
31-32		
Total		

Please turn over

THE SIPRO EDUCATIONAL SERVICES LIMITED - KAMPALA

PUBLISHERS OF THE SIPRO TEACHERS' GUIDES, LEARNER'S WORKBOOKS & PUPIL'S COMPANIONS

SECTION A: 40 MARKS

Attempt **all** *questions in this section*

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

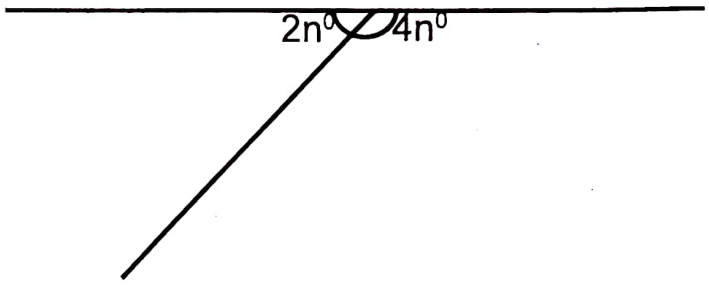
1. **Work out:** 30 ÷ 10 =

2. Given that set **R** = {composite numbers between 0 and 10 }. Find n (R)

3. Express "Sixty thousand, seven" in numerals.

4. **Simplify:** $2a^2 + 3b^2 + -4b^2 + a^2$

5. In the figure below, find the value of **n** in degrees.



6. **Simplify:** $^{-}9 - ^{-}6$

7. The probability of picking a pencil from a bag containing blue and black pencils is $\frac{4}{7}$. The bag contains 28 pencils. Find the number of blue pencils in the bag.

8. Express 25cm as a fraction of 2 metres.

9. How many lines of folding symmetry has an equilateral triangle?

10. Given that set **P** = {P.7 candidates with five heads each};
Find the number of subsets that can be obtained from set **P**.

11. **Work out:**

weeks	days
7	3
-2	5

12. Find the Lowest Common Factor (**LCF**) of 12 and 16.

13. **Add:** 2 + 3 = (finite 5)

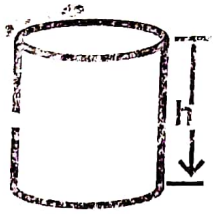
14. **Solve for r**: 3 - 2 (r - 4) = 3

15. With the help of a ruler, a pencil and a pair of compasses only, construct an angle of 45^0 in the space provided below.

16. The digits **4, 0** and **5** are used to form 3 -digit numerals. Work out the difference between the largest and smallest numerals formed.

17. **Work out:** $\frac{3}{8} + \frac{2}{3}$

18. The **base area** of a cylinder is **154cm²** Work out its radius. Take $\left(\pi = \frac{22}{7}\right)$



19. Express **2,307** in scientific notation.

20. A school bursar withdrew 55 notes of five thousand shillings numbered consecutively from AF057485. Find the registration number of the last note.

SECTION B: 60 MARKS

Attempt **all** *questions in this section.*

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

21. Amina went shopping and bought the following items;

2kg of salt at sh. 1,500 each kilogramme.

3 litres of cooking oil at sh. 6,000 per litre.

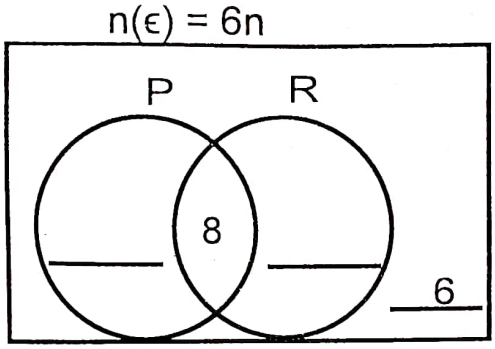
1 kg of sugar at sh. 4,000 per $\frac{1}{2}$kg.

2 bars of soap at sh. 10,000.

(a) How much did she pay for all the items? *(04 marks)*

(b) Calculate Amina's **change** if she went with a fifty thousand shilling note. *(02 marks)*

2. In a class of 6n pupils, 22 enjoy posho (**P**) only, 8 enjoy both posho and rice, 2n + 8 enjoy rice (**R**) while 6 pupils do not enjoy any of the foodstuffs.



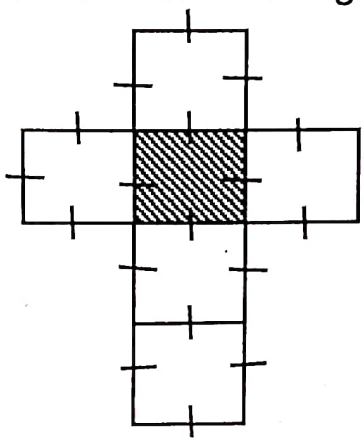
(a) Find the value of **n**. *(03 marks)*

(b) How many pupils do not enjoy **posho**? *(02 marks)*

23. (a) **Work out**: $1011_{two} - 111_{two}$ *(02 marks)*

(b) Given that; $\mathbf{f4}_{\text{nine}} = \mathbf{42}_{\text{five}}$. Find the value of **f**. *(03 marks)*

24. The figure below shows a net of a solid figure.



(a) If the area of the shaded face is **81dm**^{2}. Calculate the **length** of each side. *(02 marks)*

(b) Find the **total surface** area of the solid formed. *(02 marks)*

(c) Calculate the **volume** of the solid. *(02 marks)*

25. Using a ruler, a pencil and a pair of compasses only, construct a regular hexagon of sides 3.6cm. *(04 marks)*

26. **The graph below shows the number of watches sold in four days in a week by a trader.**

a) Complete the table. *(03marks)*

Day	Pictures	Number of watches
Monday	_____	45
Tuesday		_____
Wednesday		54
Thursday		_____

b) Work out the total number of watches sold in the **four** days. *(02 marks)*

27. Three people; Kato, Odeke and Tumushabe were told to report to police at intervals of 25 minutes, 30 minutes and 40 minutes respectively. If they reported together for the second time at 5: 42 pm, at what time did they first report together at the same time? *(05 marks)*

28. Acham deposited **sh. 800,000** in a commercial bank which offers an interest rate of 5% per annum.
a) Calculate the interest gained after a period of **18 months**. *(03 marks)*

b) How much **amount** would she have after the above period? *(02marks)*

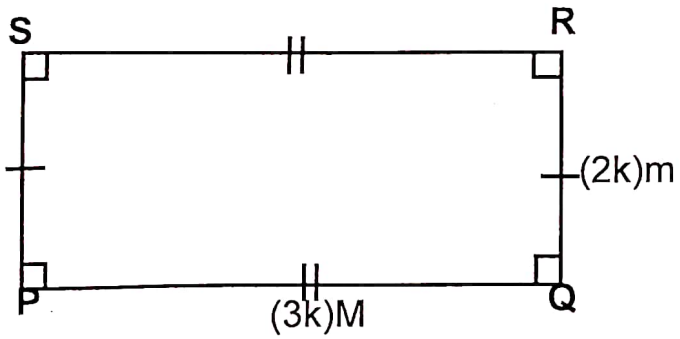
29. In a school, **25%** of the pupils wear Blue sports wear, **50%** of them wear Red sports wear while the rest wear Yellow sports wear. Using a radius of **3.0cm**, **draw** an accurate circle graph to show the above information. *(05 marks)*

30. Anne, Belinda and Christine shared 65 mangoes. Anne got 3 times as much as Belinda and Christine got 5 mangoes more than Belinda. Find the number of mangoes each person got. *(05 marks)*

31. a) Peter slept for $8\frac{3}{4}$ hours and woke up at **5:35a.m**. At what time did he start sleeping? *(02 marks)*

(b) A motorist covered a distance of **25** metres in only one second. Work out the distance he would cover in **one hour**. *(02 marks)*

32. The **perimeter** of the rectangular garden below is **60M**.



(a) Find the value of **k**. *(02 marks)*

(b) Calculate the area of the garden. *(03 marks)*