

THE SIPRO MOCK II - 2023

MATHEMATICS

Time Allowed: 1 Hour - 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:

PAGES	MARKS	INITIALS
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Page 10		
Page 11		
Total		

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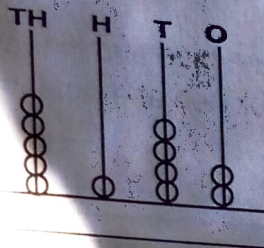
SECTION: 40 MARKS

Attempt all questions in this section

Questions 1 to 20 carry two marks each

1. Simplify: $8m + 2m$.

2. Expand the number on the abacus below using powers of 10.



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

4. Work out: 14



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P.7 MATHEMATICS MOCK II EXAMINATION - 2023

IGNITE CRITICAL THINKING AND EXPERIENCE ACTUAL LEARNING WITH THE ACTIVELY BOOKS, SEMAS, TR'S GUIDES AND PUPIL'S COMPANIONS.

5. Given that $W = \{c, o, m, p, a\}$ and $M = \{m, o, p, e, l\}$; List all the subsets in $W \cap M$.
6. Write **369,046** in words.
7. In a bag, there are **40** pens. If **6** are red, **19** are blue and the rest are black pens, what is the probability of picking a black pen at a random?
8. Using a ruler and a pair of **compasses** only, **construct** an angle of **30°** .
9. Given that $n(A) = 20$, $n(B) = 30$ and $n(A \cap B) = 10$;
Find $n(A \cup B)$



10. Wagaba bought 10 books at sh.28,000 and later sold each book at sh.9,000. Find the profit he made.

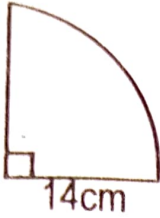
11. Given that $a = 2$, $b = 3$ and $c = 4$. Find the value of $b(a^2 + c)$

12. Find the median of 24, 16, 25, 33, 20 and 15.

13. Which lowest number of apples can be shared by 8 or 6 girls leaving 2 as a remainder?



14. Find the **distance** round the figure below. (Take π as $3\frac{1}{7}$)



15. Ann had **12** pens, she gave 4 of them to her friends. Later, the mother gave her **2** more pens, then Ann shared the pens equally between **2** pupils. How many **pens** did each pupil get?

16. The bearing of Soroti from Mbale is 045° . Find the **bearing** of Mbale from Soroti.



17. Express **5400kg** to **tonnes**.

18. Use the clock hands to show a **quarter** to **5 o'clock**.



19. Otim used **15 litres** of oil. This was $\frac{1}{3}$ of what he had. How many **litres** of oil did he have at first?

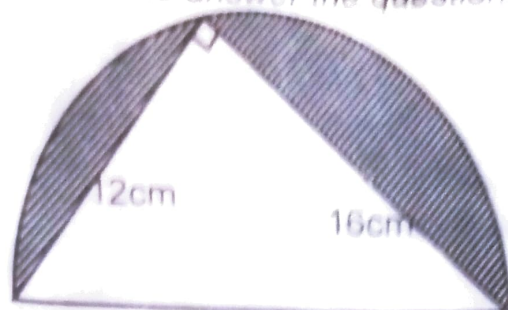
20. Simplify: $\frac{m^4 \times m^6}{m^5}$

SECTION B: 60 MARKS

Attempt **all** questions in this section

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

21. The diagram below is made up of a semi-circle and a right angled triangle. Use it to answer the questions that follow



- a) Find the length of the diameter of the semi-circle.

(02Marks)

- b) Calculate the circumference of the semi-circle,
(Take π as 3.14)

(02Marks)

- 22.a) Write 523.4 in standard form.

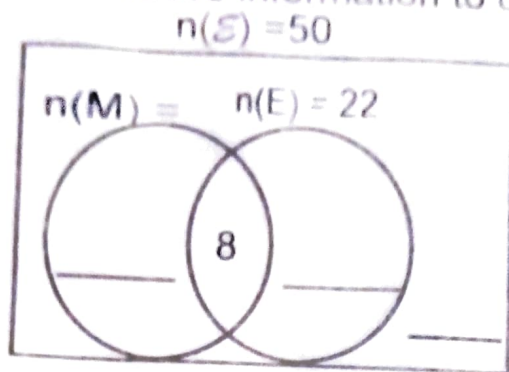
(02Marks)

- b) Solve $2^n \times 8 = 64$.



In a class of 50 pupils, 8 pupils passed both Maths and English, 22 passed English, $(y + 8)$ pupils passed maths only while $(y - 2)$ passed neither of the two subjects.

a) Use the above information to complete the venn diagram below.

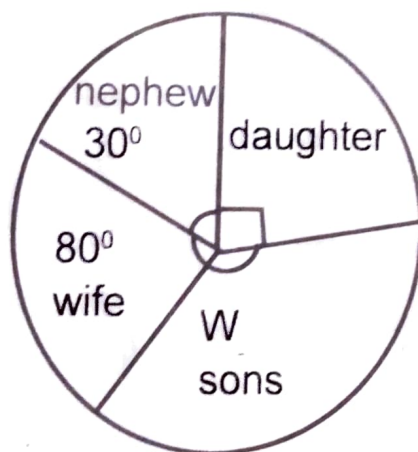


(03 Marks)

b) Find how many pupils **passed** mathematics.

(03Marks)

24. The **circle graph** below shows how Kahoti distributed his land. Use it to answer the questions that follow.



a) If he gave **13 acres** to his sons; Find the number of acres he had altogether.

(04Marks)

b) Express the number of acres he gave to his wife as **percentage**.

25. At a certain school, $\frac{5}{8}$ are girls. One day, all boys came to school and $\frac{4}{5}$ of the girls were absent. (02 Marks)

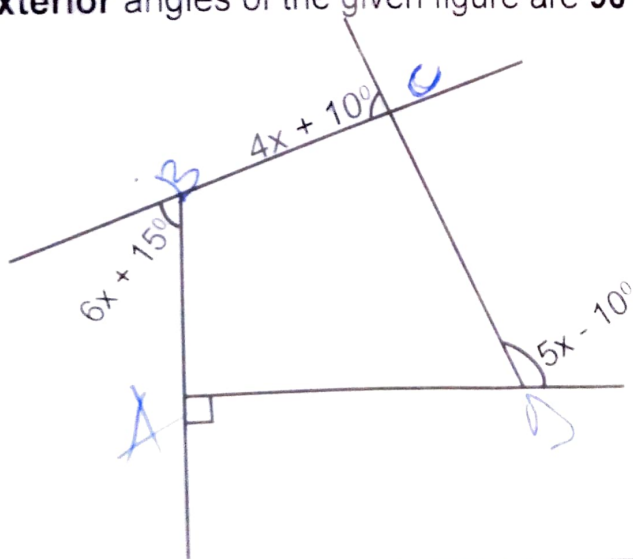
a) What **fraction** of the school was present?

(03 Marks)

b) If **50** girls were **present** that day, what is the **enrolment** of the school?

(02 Marks)

26. The **exterior** angles of the given figure are 90° , $4x+10^\circ$, $5x-10^\circ$ and $6x+15^\circ$



a) Find the value of **X**

b) What is the **size** of angle **BCD**?

(03Marks)

(02Marks)

27. Mutesi went shopping and bought the following:

*2 bars of **soap** for **sh. 13,000***

*3 kg of **sugar** for **sh. 4500** per kg.*

*6 **apples** at **sh.2500** for 3 apples.*

a) Find the cost of **apples**.

(02Marks)

b) Work out the **total cost** of all the items.

(02Marks)

c) If Mutesi had **sh.50,000**, What was her **change**?

(01Mark)

28.a) Moses is **3** times as heavy as Jokas. Jokas is $\frac{1}{2}$ of Jorem's weight. If their total weight is **180kg**. What is the weight of Jokas?

(03Marks)

b) **Solve** and write the **solution set** for the inequality $3p < 12$.

(03Marks)

29.a) Using a pair of compasses, a ruler and a pencil only, **construct** a quadrilateral **ABCD** where **AB=7cm**, **AD = 3cm**, angle **DAB = 90°** and angle **ABC = 45°**.

(05Marks)

30.a) **Work out:** $\frac{2.2 \times 0.45}{0.5 \times 0.6}$

(02marks)

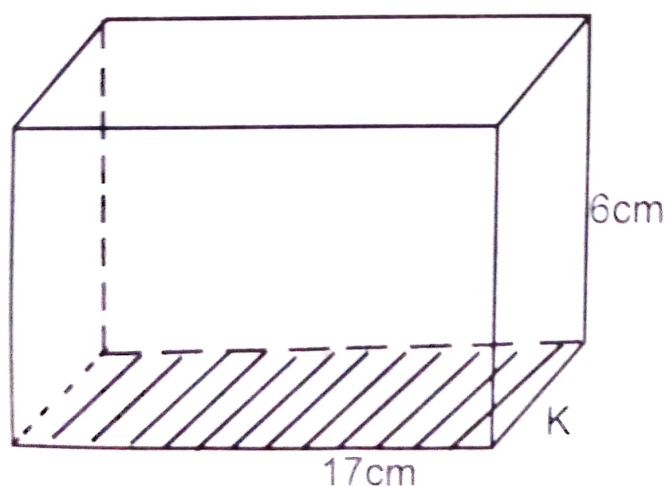
b) Change $\frac{3}{5}$ to a decimal number.

31. A motorist drove for **3 hours** at an average speed of **90km/h**. He then travelled at an average speed of **70km/h** for **2hours** to cover the remaining journey. (02marks)

a) Find the **average speed** of the motorist for the whole journey.

b) If one litre of fuel covers **20km**, how much fuel did the motorist use for the first journey? (03marks)

32. The volume of the cuboid below is **918cm³**. Find the **area** of the shaded part. (02marks)



(05marks)