

# THE SIPRO P.7 MOCK 2024

## 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/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;

| 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:** 1 2 4

$$\begin{array}{r} 124 \\ \times 2 \\ \hline \end{array}$$

2. **Simplify:**  $4k - m + 5k + 3m$ .

3. Write "Four thousand, four hundred forty-four in **figures**.

4. A block weighs **630gm**. Express the mass of the block in kilogrammes.

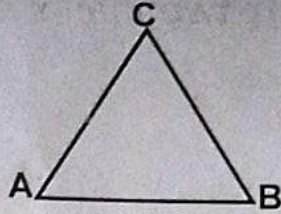
5. If set  $R = \{1, 2, 3, 4, 5\}$  and  $T = \{2, 4, 6, 7\}$ . Find the **number** of **subsets** in  $R \cap T$ .

6. Given that  $2t + 4 = 10$ , find the value of  $2t$ .





7. The diagram below shows a triangle **ABC** in which  $\angle ABC = \angle BAC = \angle ACB = 2P$ . Find the value of  $P$  in degrees.



8. Find the next number in the sequence.

2, 4, 12, 24, \_\_\_\_\_

9. Find the supplementary angle of  $(75 - 3t)^\circ$ .

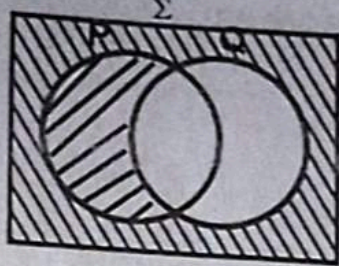
10. A flight that took  $1\frac{1}{2}$  hours ended at 1:00pm. At what **time** did the flight start?

11. Find the **range** of -3, 5, 0, -7, 4

12. Round off **4352** to the nearest hundreds.



13. Describe the shaded region in the venn diagram below.



14. In a line of trees, the mango is the fourth from the left and the 6th from the right of the line. How many trees are in the line altogether?

15. Increase 70 bags of sugar in the ratio of  $\frac{3}{4} : \frac{1}{2}$

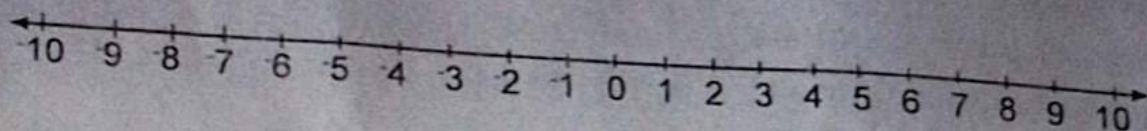
16. Sanyu bought 5 heaps of oranges at sh. 6,000. How many heaps would she buy with sh. 8,400?



17. The probability that John passes the exam is 0.7. Find the probability that he fails the exams.



18. Using the number line below, work out  $2 \times -3$



19. Express **0.666** ..... as a common fraction in its simplest form.

20. On the clock face below, show 20 minutes to 5 o'clock.



### SECTION B: 60 MARKS

*Attempt all questions in this section.*

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

21. The table below shows how the P.7 candidates of Premier Junior School - Namugo scored in a Friday mental exercise. Study and use it to answer the questions that follow.

| Marks scored | Number of pupils | Total marks |
|--------------|------------------|-------------|
| 3            | 4                | 12          |
| _____        | 9                | 45          |
| 6            | _____            | 84          |
| 8            | 8                | _____       |
| _____        | 5                | 75          |

- a) Complete the table above.

(04 marks)





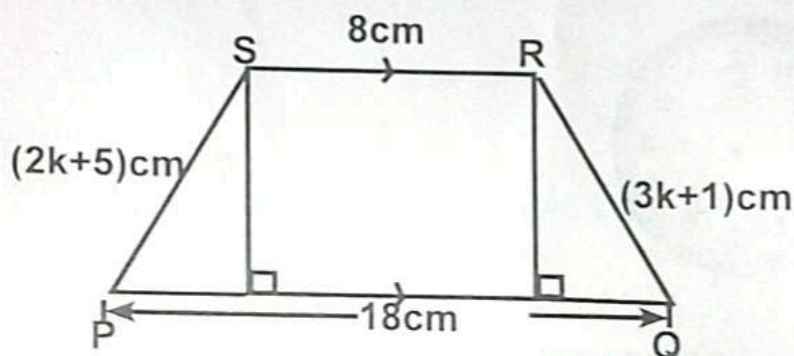
- b) If each of the above candidates was given **two** books, how many books did they get altogether? (02 marks)

22. Given that  $2y = 4x + 2$ , complete the table below. (04 marks)

|   |       |       |       |       |
|---|-------|-------|-------|-------|
| X | 0     | _____ | -2    | _____ |
| Y | _____ | 3     | _____ | -3    |



23. The figure below shows an isosceles trapezoidal cardboard. Use it to answer the questions that follow.



- Find the value of  $k$ . (02 marks)
- Calculate the **perimeter** of the above figure. (02 marks)
- Work out the **height** of the cardboard. (02 marks)

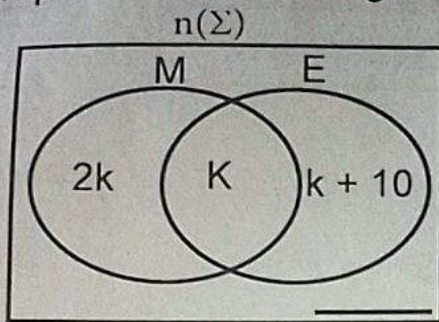


24. The venn diagram below shows the number of pupils who like Mathematics (**M**) and English (**E**) in a P.7 class at King's Newton School - Wakiso. The number of pupils who like English only is the same as that of those who like Mathematics. The number of pupils who like other subjects is  $\frac{1}{6}$  of those in the union of the two sets.

sets.

- a) Complete the venn diagram below.

(01 mark)



- b) Find the total number of pupils in the class.

(04 marks)



25. There are 960 females in a certain village 40% of the people in the village are males. If each person in the village received 200 coffee seedlings, how many seedlings were supplied to the village altogether? (05 marks)



26. The sum of the values in the table below is the same vertically, horizontally and diagonally. Study and use it to answer the questions that follow.

|       |       |       |
|-------|-------|-------|
| 16    | 2     | _____ |
| _____ | 10    | 14    |
| 8     | _____ | 4     |

a) Find the magic sum.

(01 mark)

b) Fill in the missing values.

(03 marks)



27. Follow the instructions below and construct a parallelogram ABCD in the space provided. Draw a horizontal line AB of length 8cm. Draw a perpendicular bisector of line AB. Mark point O where the bisector meets line AB. Measure the length of 4cm from O along the bisector, mark the point D. Join A to D. Lines AD and AB form two sides of the parallelogram ABCD. Complete the diagram to form a parallelogram.

(04 marks)



28. The table below shows how different types of crops are bought and sold at a certain village store. Use it to answer the questions that follow.

| Type of crop  | Rate at which the store buys | Rate at which the store sells. |
|---------------|------------------------------|--------------------------------|
| 1kg of coffee | sh. 3,550                    | sh. 3,600                      |
| 1kg of maize  | sh. 850                      | sh. 870                        |
| 1kg of beans  | sh. 1,250                    | sh. 1,300                      |

a) One day, the storekeeper made a profit of **sh. 3,900** on beans. Find in kilogrammes, the mass of the beans sold. (02 marks)

b) Wasswa had 174 kilogrammes of coffee that he exchanged for maize, how many kilogrammes of maize did he get? (03 marks)

29. The table below shows how a cyclist travelled from town A through towns B and C to town D.

| Town | Arrival  | Departure |
|------|----------|-----------|
| A    |          | 10:00a.m  |
| B    | 10:30a.m | 10:45a.m  |
| C    | 11:15a.m | 11:30am   |
| D    | 1:15p.m  |           |

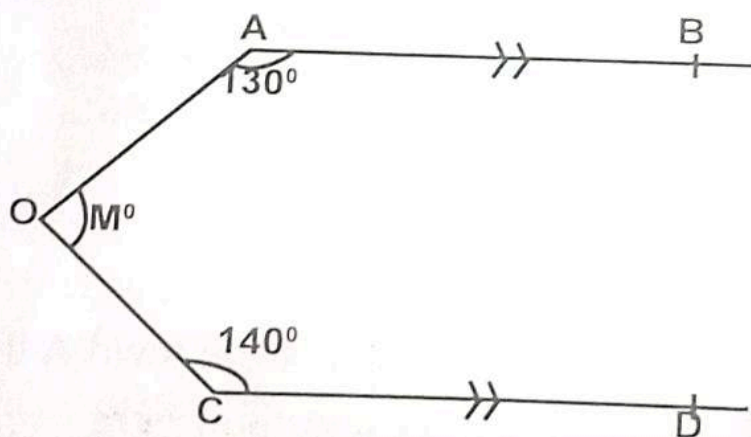
a) How long did the cyclist stay at town C? (02 marks)



b) Find the time the cyclist took to travel from town C to town D.  
(02 marks)

c) Change the arrival time at town B to 24 hour clock system.  
(01 mark)

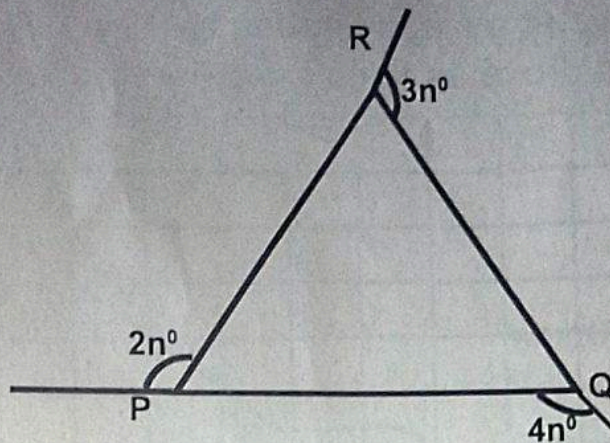
30. In the figure below, AB is parallel to CD, angle OAB =  $130^\circ$  and angle OCD =  $140^\circ$



a) Find the value of  $M$  in degrees.  
(02 marks)



- b) The diagram below shows a triangle **PQR**. Find the value of  $n$  in degrees. (02 marks)



31. The median of 4 consecutive even numbers is 27.

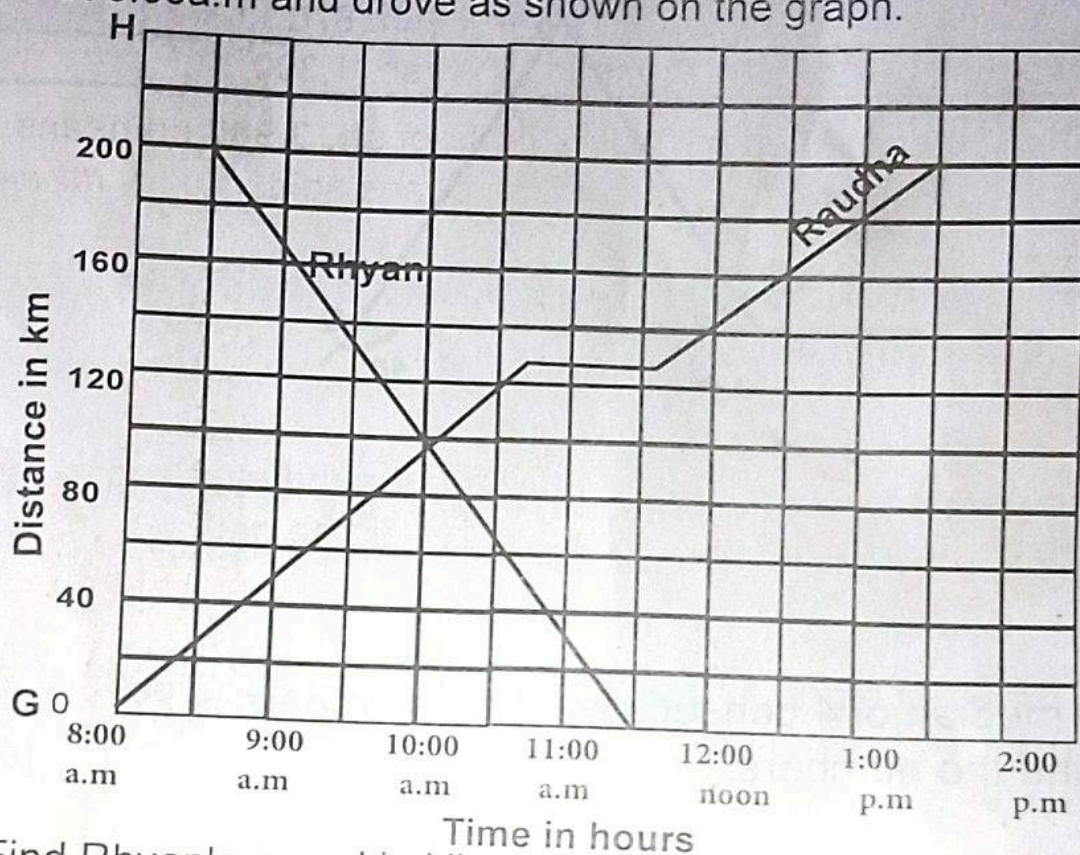
a) Find the numbers.

(03 marks)

b) Work out the product of the largest and least numbers. (02 marks)



32. The graph below shows the journey made by Ryhan and Raudhar between towns G and H, 200 metres apart. Ryhan left town H at 8:30a.m and drove at a steady speed to town G. Raudha left town G at 8:00a.m and drove as shown on the graph.



- a) Find Ryhan's speed in kilometers per hour. (02 marks)
- b) At what time did Ryhan and Raudhar meet? (01 mark)
- c) Calculate Raudhar's average speed after resting. (02 marks)