THE PRIME EXAMINATIONS 2024
P.7 MAGIC SET I
MATHEMATICS

Time allowed 2 hours 30 minutes

INDEX NO:

Candidate's Name: ....

Candidate's Signature: ....

District ID No.: ....
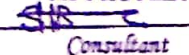
READ THE FOLLOWING INSTRUCTIONS CAREFULLY

1. Do not write your **school** or **district name** anywhere on this paper.

2. This paper has **two** sections: **A** and **B** Section **A** has **20** questions and section **B** has **12** questions. The paper has **9 printed pages**.

3. Answer **all** questions. **All** the working for both sections **A** and **B** must be shown in the spaces provided.

4. **All** working **must** be done using a **blue** or **black** ball point pen or ink. Any work done in pencil other than graphs and diagrams will **not** be marked.

5. **No calculators** are allowed in the examination room.

6. Unnecessary **changes** in your work and handwriting that cannot easily be read may lead to **loss of marks**.

7. Do **not** fill anything in the table indicated "**For Examiners' use only**", and those boxes inside the question paper.

FOR EXAMINERS' USE ONLY

QUESTION NUMBER	MARKS ATTAINED	INITIALS
1 – 5		
6 – 10		
11 – 15		
16 – 20		
21 – 22		
23 - 24		
25 -26		
27 - 28		
29 - 30		
31 - 32		
TOTAL		

APPROVED:

Consultant

Mathematics Department (PEC)

Turn Over

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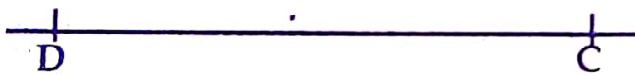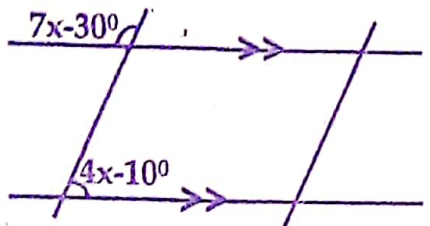| 1	Workout: $\begin{array}{r} 6\ 7 \\ -2\ 5 \\ \hline \\ \hline \end{array}$	2	Express 49 in Roman numerals.
3	Simplify: 6x + 4m + x − 3m	4	Describe the unshaded region in the Venn diagram below.
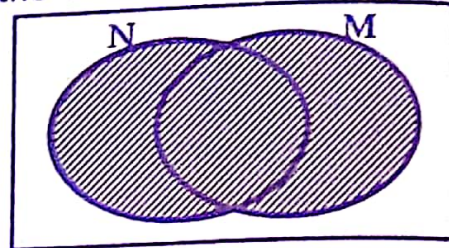
5 Round off 13.846 to the nearest whole number.

6 Using a ruler, a pencil and a pair of compasses only, construct a line PQ parallel to line DC at point X.

.X

D   C

7	A boy bought 1750 grams of salt. How many kilograms did the boy buy?	8	Given that 🌳 represents 4 trees. Draw such pictures to represent 20 trees.
9	Work out: $2c - 1 = 4$ (finite 7)	10	Find the next numbers in the sequence; 84, 56, 35, 20, 10, _____, _____

11 Study the Venn diagram and find the value of x.

$7x-30^0$

$4x-10^0$

12 Tumusiimwe covered a distance of 170km in $4\frac{1}{4}$ hours. Calculate the speed at which Tumusiimwe was moving.

13	Write 11 as base two numeral.	14	Find the maximum number of girls who can share 6 or 8 mangoes leaving no remainder.

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PTO
THE PRIME MATHEMATICS MAGIC SET I EXAMINATIONS 2024.
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LESSON COURSE BOOKS AND PUPILS' WORKBOOKS.
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15 A farmer deposited sh.360,000 in a bank at an interest rate of 15% per month for 4 months. Calculate the farmer's simple interest.

16 Given point K (-3, 0), plot the co-ordinates of point K on the grid below.
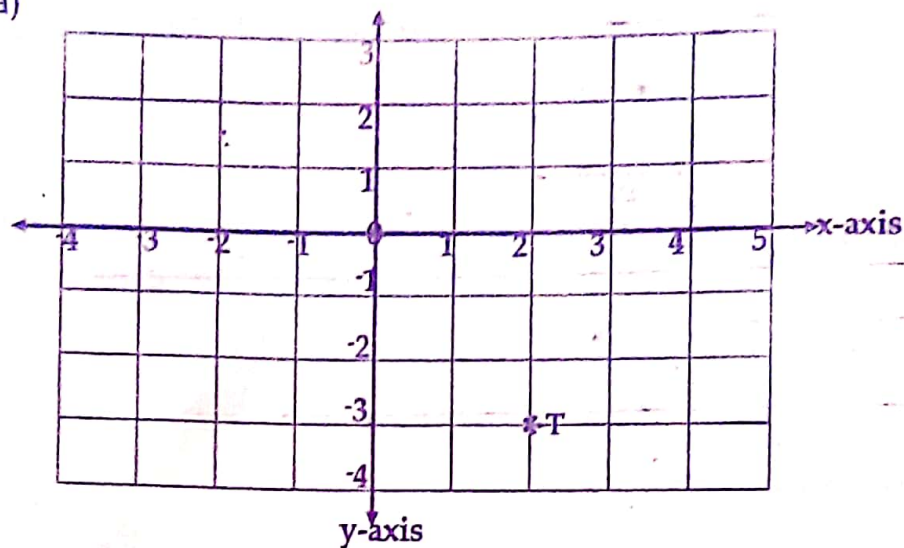
(a)   (01 mark)

(a) Write the coordinates of point T.   (01 mark)

17 A motorist started his journey at 1720 hours and reached his destination after two and half hours. At what time did he reach his destination?
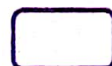
|		
18 Solve the inequality: $2k - 6 \leq -10$		**19** The cost of buying **3kg of coffee is sh 27,000**. Find the cost of buying **5kg of coffee** at the same rate.

20 Florence fenced her rectangular piece of land that covers a total distance of **0.04km** using poles fixed at an interval of **5metres**. Find the number of poles she used.

Section B (60 Marks)

21 The diagram below shows the addition of numbers using abacus. Study it and answer the questions that follow.
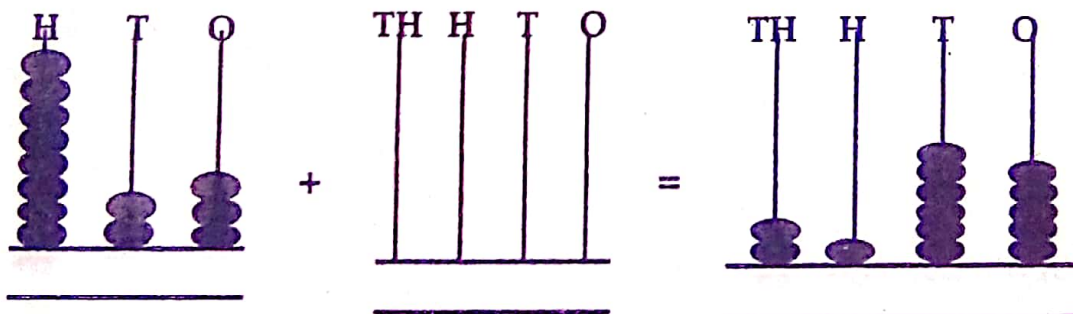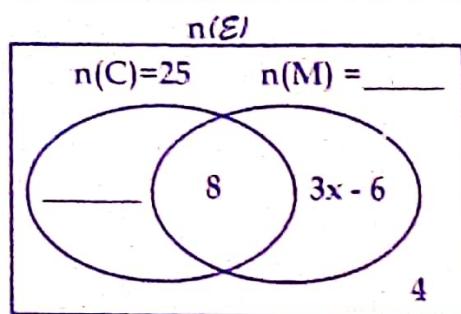

(a) Complete the above abacus correctly.   *(05 marks)*

22 In a certain village, 25 farmers were given cassava stems (C), (3x-6) farmers were given maize seeds (M) and 8 farmers received both cassava stems and maize seeds while 4 farmers got none of the above.

(a) Use the information above to complete the Venn diagram below.

(02 marks)

n(ℰ)

n(C)=25   n(M) =_____

8   3x - 6

_____

4

(b) Given that 26 farmers got maize seeds, find the value of x.   (03 marks)

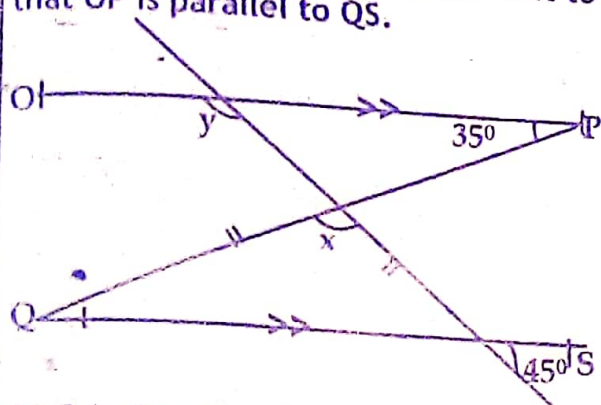**23** (a) Workout: $\dfrac{0.24 - 0.08}{0.01 + 0.03}$ (03 marks)

(b) Workout: 3. 41 – 7.31 + 5.06   (02 marks)

24 Study the diagram below and use it to answer the following questions. Given that OP is parallel to QS.

(a) Find the size of angle x. (03 marks)

(b) Calculate the size of angle y.

(03 marks)

25 Mrs. Matovu went for shopping and bought the following items.

3kg of sugar at sh.5,300 per kg.

$1\frac{1}{2}$ kg of meat for sh. 15,000 a kg.

750 grammes of tea leaves at sh 800 per $\frac{1}{2}$kg.

2 loaves of bread for sh.10,600.

(a) If she went back with a change of sh 9,800, how much money did she go with. (05 marks)

26 A motorist left Soroti at 1:20pm moving at a speed of 54km/h. He reached Mbale at 3:50pm. The motorist then left Mbale after half an hour for Jinja moving at a speed of 85km/h for 2 hours. Calculate the average speed of the motorist for the whole journey. *(05 marks)*

27 The cylindrical tank below contains 30.8 litres of petrol when completely full.

(a) Find its height. ($\pi = \frac{22}{7}$) *(03 marks)*

28cm

(b) Find the capacity of the tank when it's $\frac{3}{4}$ full of water. *(02 marks)*

28 The pupils scored the following marks in a test as shown on the table below.

Number of pupils	80	60	90	70
Marks	2	n	1	4

(a) Find the value of n, if the average score was 71. *(03 marks)*

(b) Find the number of pupils who scored below the mean mark. *(02 marks)*
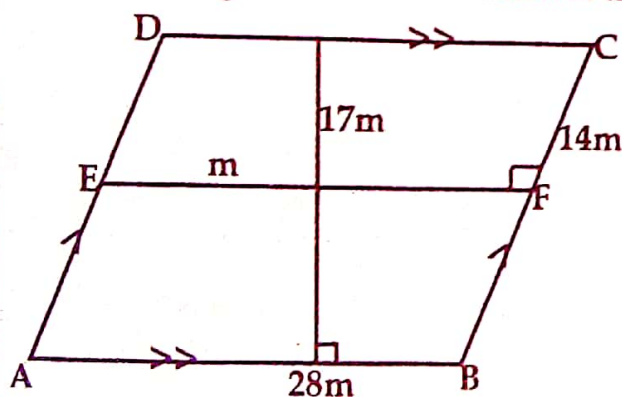
29 In the village meeting, the number of men, children and women are in the ratio of 2:5:3 respectively. If the number of women in the meeting is 40 less than the number of children.

(a) Find the number of people in the village meeting. *(03 marks)*

(b) How many more women than men are in the meeting? *(02 marks)*

30 Study the diagram below and answer the questions about it.

(a) Find the area of ABCD. *(02 marks)*

(b) Workout the length of EF.　　　　　　　　　　　　　　　(02 marks)

31　At Mrs Kabaho's shop, the cost of a pen is sh 700 less than the cost of a book. The cost of a book is three quarters the cost of a set. If the total cost of all the 3 items is sh 14300. Find the total cost of two books and two sets.　(05 marks)

32　A plane flew to airport B from airport A on a bearing of 225^0 covering a distance of 450km. It later changed its direction and flew North of airport B to airport C a distance of 250km. If 1cm represents 50km,

(a) draw an accurate diagram showing the 3 airports.　　　　(04 marks)

(b) calculate the short distance from airport A to airport C.　　(01 mark)