THE PRIME EXAMINATIONS 2024
P.7 MAGIC SET IV
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.

Turn Over

Section A (40 Marks)

1 Workout: 496 + 23

2 Write 110372 in words.

3 Given that
set M = {6, 5, 7, 8, 9, 10, 11} and
set N = {1, 2, 3, 4, 5, 6, 7}
find n(MUN)

4 Work out: $1\frac{2}{7} \times \frac{4}{5}$

5 Simplify: 3x – 4y + 5x – 7y

6 Find the next number in the sequence below.

576, 36, 4, 1, _____

7 Using a ruler, a pencil and a pair of compasses, construct an angle of 105^0.

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THE PRIME MATHEMATICS MAGIC SET IV EXAMINATIONS 2024.
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8	The cost of 3 books is sh 7,500. Find the cost of 7 similar books.	9	Convert 0.907kg to grammes.
10	Subtract 414$_{five}$ - 343$_{five}$	11	Given that a =-3, b=3 and c =2. Find the value of ab-c
12	**Today is Monday,** what day of the week was it **35 days ago?**	13	Express 679.3 in standard form.

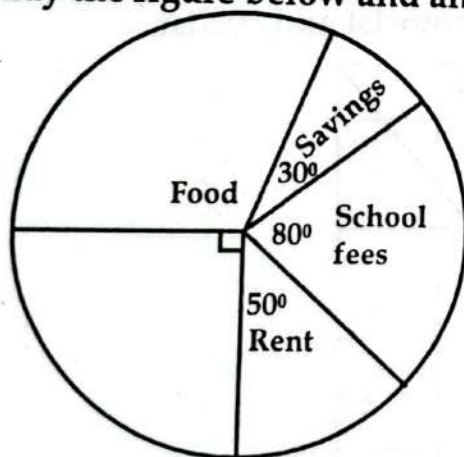14 The graph below shows the journeys made a motorist and cyclist.
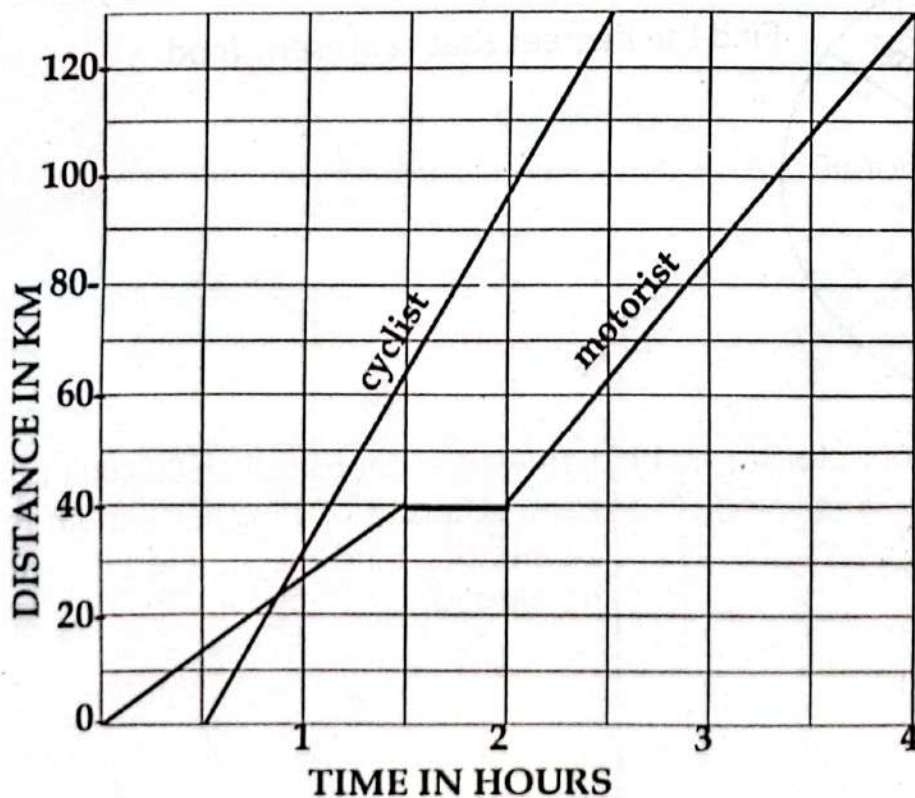
How many more hours did the motorist take on his journey than the cyclist?

15	The bearing from Apac to Mbale is 130^0. Find the bearing of Apac from Mbale.	16	The speed of a bus is 84km/hr. What distance will the bus have covered in $3\frac{1}{2}$ hr?

17 Study the figure below and answer the questions that follow.

Find the degrees that represent food.

18	Convert 14 30 hr to 12 hour clock system.	19	Kamwenge deposited sh 800,000 in a bank at a rate of 15% per annum for 24 months. Find the simple interest he earned.

20. Work out: $2^2 \times 2^{8x} = 2^{-3}$

21. Given the numeral 40725.

(a) What is the place value of 0 in the numeral above? *(01 marks)*
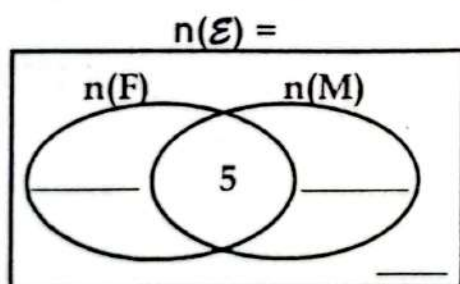
(b) Find the difference between the value of 4 and the value of 7. *(03 marks)*

22. At a party attended by 28 guests, 16 drank Fanta (F), 15 drank Mirinda (M), 5 drank both Fanta and Mirinda. If (p – 1) drank none of the drinks.

(a) Show the above information on a Venn diagram below. *(03 marks)*

$n(\varepsilon) =$

n(F)   n(M)

___   5   ___

___

(b) How many guests drank none of the drinks? *(03 marks)*

23. Sseremba went shopping and bought the following items.

> 3kg of meat at sh 12,000 per kg
>
> $2\frac{1}{2}$ kg of rice at sh 4,000 per kg
>
> 500gm of beans at sh 3,000 per kg
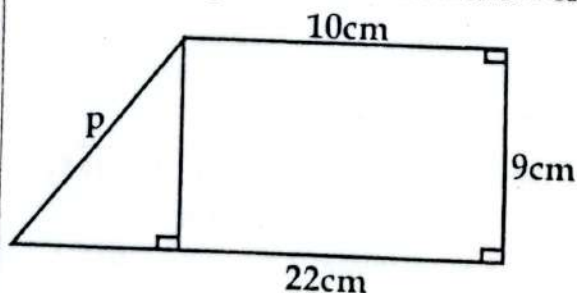>
> 4 litres of cooking oil at sh 14,000

(a) Find Sseremba's total expenditure. (04 marks)

(b) If Sseremba had 4 notes of sh 20,000 each. Find his change. (01 mark)

24 Study the figure below and answer the questions that follow.

10cm

p

9cm

22cm

(a) Find the side marked **p**. (02 marks)

(b) Workout the distance around the figure. (01 mark)

(c) Find the area of the figure. (02 marks)

25 (a) Work out: $\dfrac{0.096 \times 0.12}{0.08 \times 0.6}$ (03 *marks*)

(b) Simplify: $\dfrac{8}{9} \div \dfrac{1}{2} \times \dfrac{2}{3}$ (03 *marks*)

26 Using a ruler, a pencil and a pair of compasses, construct a parallelogram EFGH in which EF = 7cm, FG = 5.0cm and angle EFG = 120⁰. Drop a perpendicular from H to meet EF at O. (05 *marks*)

27 The time table shows the journey made by a train from Kampala to Tororo.

Place	Arrival time	Departure time
Kampala		06 00hrs
Jinja	10 00hrs	10 30hrs
Iganga	12 30hrs	13 45hrs
Bugiri	14 45hrs	15 00hrs
Tororo	16 00hrs	

(a) Convert the arrival time of the train in Iganga in **12 hour clock system.**

(01 mark)

(b) Find the total time taken by the train to travel from Kampala to Tororo.

(02 marks)

(c) Find the total time taken by the train on all stop overs.

(02 marks)

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28 | Study the exchange rates below and answer the questions that follow.

1 USA dollar is equivalent to Ugsh 3600
*1 Kenya sh is equivalent to Ugsh 3200*

(a) How much money in Kenya shillings will a tourist get from the exchange of Ug sh 1,440,000?

(02 marks)

(b) Erikison had 2800 U.S.A dollars and exchanged them to Kenya shillings. How Much in Kenya shilling did he get?

(03 marks)

29 Three metal rods of length 108cm, 208cm and 560cm are cut into pieces of the same length.

(a) Find the greatest length which can be cut out of the rods without leaving a remainder. *(02 marks)*

(b) How many pieces can be cut from the rod with the greatest length? *(02 marks)*

30 The average of $y + 7$, $y + 9$, 17, 19, $25 - y$ and $11 + y$ is 16. Find the value of y. *(03 marks)*

(b) Find the median of the above data. *(02 marks)*

31 Matope has r cows. Nkaissery has 20 more cows than Matope. Sendeyo has 15 cows less than the total number that Matope and Nkaissery have. If they all have 85 cows altogether.

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

(b) How many cows does Sendeyo have? (02 *marks*)

32. In the figure below, line WX is parallel to line YZ and WV = VZ. Angle WXZ = 41^0 and angle WYZ = 53^0.
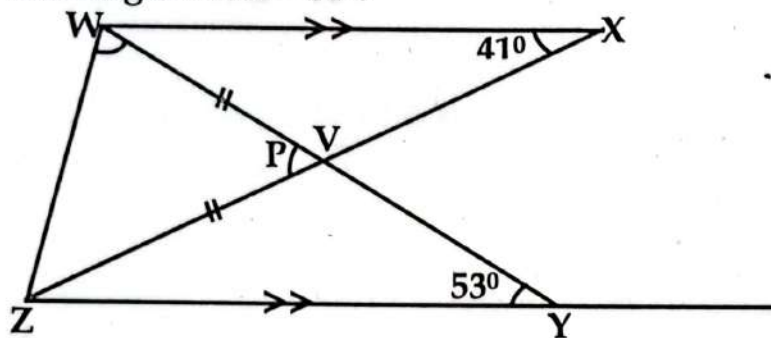
(a) Find the value of P. (03 *marks*)

(a) Find the size of angle ZWX. (02 *marks*)

Review your answers
Always make sure you read through your answers before submitting the test/exam paper. It will help you find any mistakes or questions you may have misread or misinterpreted.