



HORMISDALLEN SCHOOLS

ACADEMIC BOARD EXAMINATION (HOSABE)

P.7 MATHEMATICS MID TERM I -2024

Name: _____

Branch: _____ Stream: _____


INSTRUCTIONS

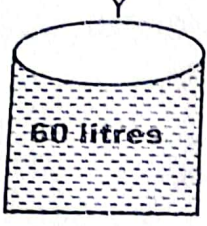

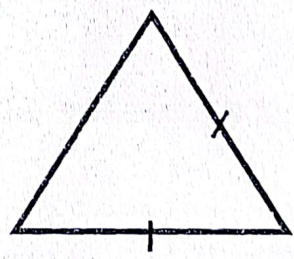
1. Attempt all questions.
2. Any drawing must be done in pencil.
3. Use a very good handwriting.
4. No calculators are allowed in the examination room.

DURATION: 2 hours and 30 minutes

SECTION A	
SECTION B	
TOTAL	

SECTION A (40marks)

1.	Work out: 21×3	2.	Write 14049 in words.
3.	Study the sequence below carefully and find the sum of the next two numbers. 1, 3, 6, 10, 15, _____, _____	4.	Given that $W = \{s, t, r, i, c, h\}$ and $N = \{o, h, m, e, c\}$. Find $n(W \cup N)$
5.	Workout the range of the integers 6, 9, -4, 3, -6 and 12	6.	Given that  represent 6 tomatoes. Draw diagrams to represent 42 tomatoes.

<p>13. Below are containers X and Y. 60 litres of milk in container Y are sold using a half litre cups of X.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>Y</p>  <p>60 litres</p> </div> <div style="text-align: center;"> <p>X</p>  <p>$\frac{1}{2}$ litres</p> </div> </div> <p>How many cups of X are sold from container Y?</p>	<p>14. Find the circumference of a circular flower garden whose radius is 7dm. (Use π as $\frac{22}{7}$)</p>
<p>15. Express 36km/h. as m/sec.</p>	<p>16. Given that $W = 2y + 8$ and $y = -2$ Find the value of $w - 2y$.</p>
<p>17. Twelve technicians can install electricity on a building in 10 days. How many more technicians are needed to complete the work in 8 days.</p>	<p>18. Show and name the lines of folding symmetry in the figure below.</p> <div style="text-align: center;">  </div>

19.	Convert 123_{five} to denary base.	20.	In a basket, there are 12 red pens and some blue pens. Find the probability of picking a blue pen at random if the total number of pens in the basket is 20 .
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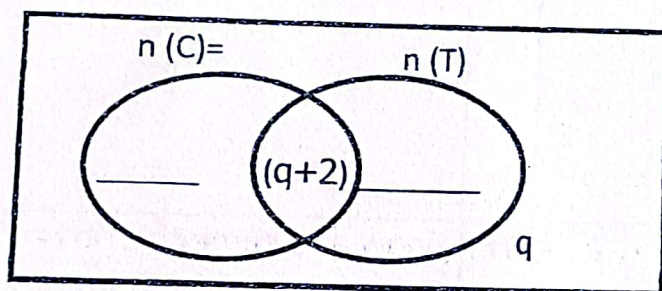
SECTION B (60 marks)

(Marks for *each* question are indicated in the *brackets*.)

21. In a group of **65** farmers, **42** farmers grow cabbages, **(q+2)** grow both crops while **(2q + 2)** farmers grow tomatoes but not cabbages. If **q** farmers grow neither of the two crops.

a) Complete the Venn diagram below.

(2marks)



- b) Given that **25** farmers grow tomatoes. Find the value of **q**.

(3marks)

22. a) Write 1011_{two} in words.

(1mark)

b) Workout;

$$\begin{array}{r} 123_{\text{five}} \\ - 44_{\text{five}} \\ \hline \end{array}$$

(2marks)

c) Given that $2m_{\text{four}} = 45_{\text{ten}}$. Find the value of **m**.

(2marks)

23. a) Express **0.2525**.....as a simple fraction.

(2marks)

b) Work out: $\frac{0.12 \times 0.48}{0.16 \times 0.4}$

(3marks)

24. Given the numeral **29045**.

a) Write the place value of **0** in the above numeral.

(1mark)

b) Workout the sum of the value of **9** and **4** from the above numeral.

(2marks)

c) Write the above numeral in expanded form using values.

(2marks)

25. The sum of three consecutive integer is **54**.

a) Find the integers.

(4marks)

b) Work out the quotient of the largest integer and **4**.

(2marks)

26. Below are the costs of items at a certain shop.

3kg of sugar at sh.9600.

2 litres of cooking oil at 12000.

1kg of rice at sh.5500.

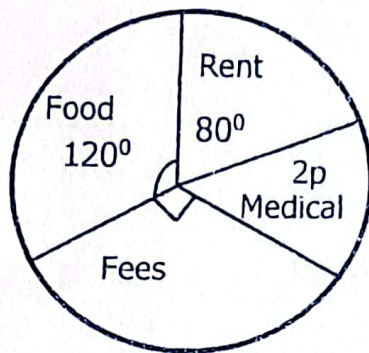
250gm of millet flour at sh.2000.

a) How much does Dan pay if he buys 1 kilogram of millet flour. (2marks)

b) Find the total cost of 2kg of rice, 1kg of sugar and $\frac{1}{2}$ litre of cooking oil.

(4marks)

27. Below is a circle graph showing how a parent spent her income of sh.360000 in a month. use it to answer the questions that follow.



a) Find the value of p .

(2marks)

b) How much more money did she spend on food than medical? (2marks)

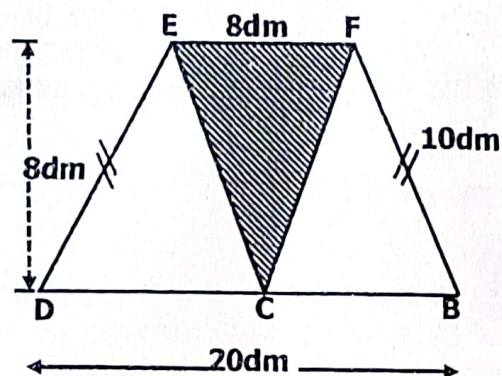
c) What percentage of her income was spent on fees?

(1mark)

28. With the help of a ruler, sharp pencil and a pair of compasses only, construct a triangle PTA such that $TA = 8.0\text{cm}$ angle $PTA = 60^\circ$ and angle $TAP = 45^\circ$. (4marks)

- b) Measure the size of angle **APT**. (1mark)

29. Study the figure below carefully and use it to answer the questions that follow.



- a) Calculate the area of the shaded figure **CEF**. (2marks)

- b) Work out the area of the unshaded part. (2marks)

30. The length of the rectangle is 5cm longer than its width. If the total distance around the figure is 34cm.

a) Work out the width of the rectangle.

(3marks)

b) Calculate the area of the rectangle.

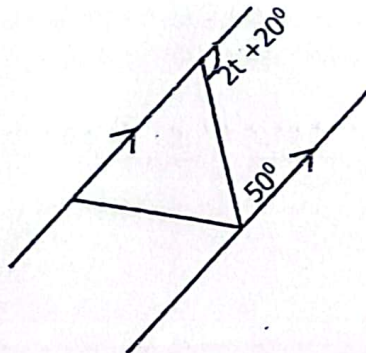
(2marks)

31. a) Work out the complement of 65° .

(2marks)

b) Study the figure below carefully and find the value of t .

(2marks)



32. A motorist drove from town **X** to town **Y** at steady speed of 60km/hr for 4 hours. He then continued to town **Z** for another period of 6 hours.

Calculate the motorist average speed for the whole journey.

(5marks)

END