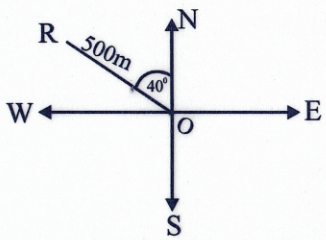
Grade - 08	Third Term Test - 2024	32 | E | I,II
Index No.....	Mathematics	Time - 02 hours

Part - I

- **Answer all questions in the paper itself.**
- **2 marks for each correct answer for questions from 1 - 20.**

01. The fuel tank capacity of a motorcycle is $5l$. It has $4\,l\ 800\,ml$ of fuel. How much more fuel should be added to fill the tank completely.

02. Describe the location of R with respect to O

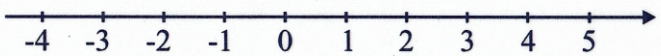


03. The following table shows the lengths of several chords to take for the diameter of a circular tank.

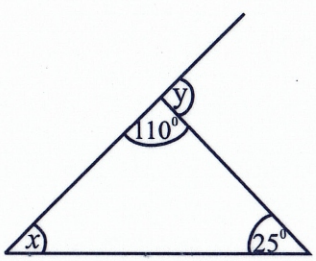
Accordingly, what should be the diameter of the tank?

lengths of chord
14.1
14.8
15.0
15.1

04. Mark the set of integral solutions of the inequality $x > 1.5$ on number line.



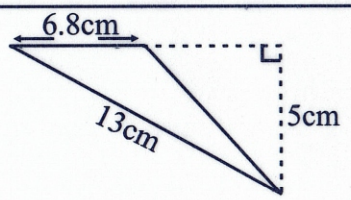
05. Find the magnitude of the angles indicated by x and y of the given figure.



06. Simplify $15 \times 3\frac{1}{6}$

07. The mass of a bar of soap is 85.4g. Find the mass of 12 such soaps.

08. Find the area of the triangle shown in the figure.



09. A = { The letters in the word 'අවසරය' }
Write this set by listing all its elements within curly brackets.

10. Solve $\frac{2x}{3} - 1 = 5$

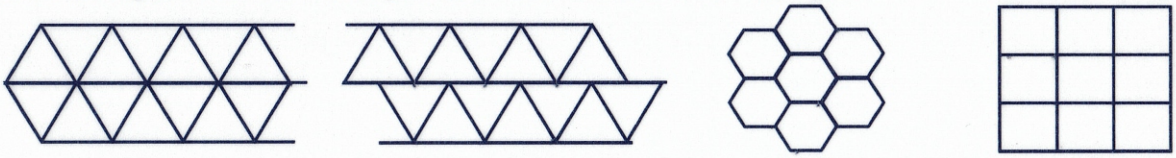
11. On a map drawn to the scale 1:50000, the distance between two cities is 4 cm. What is the actual distance between two cities in Kilometers.

12. Find the mode and the range of the following collection of data.

7, 6, 7, 8, 10, 7, 5, 9, 12

13. Find the probability of getting a prime number when an unbiased die is rolled.

14. Select the figure which is not a regular tessellation out of following figures.

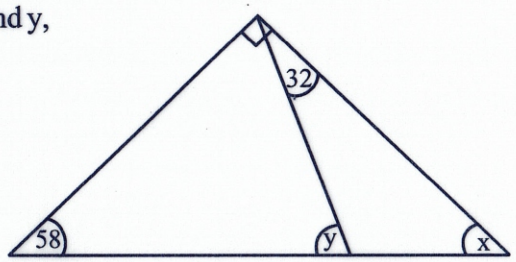


(a) (b) (c) (d)

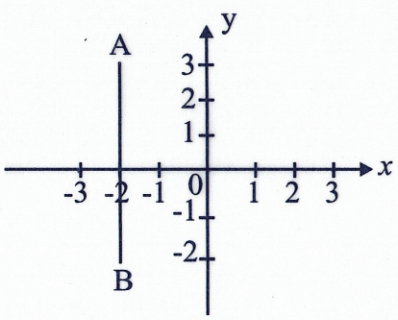
15. Simplify. $3\frac{1}{13} \times 6\frac{1}{2}$

16. Represent 300g from 1 kg as a percentage.

17. Find the magnitude of the angles indicated by x and y, of the given figure.

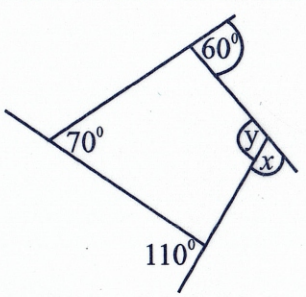


18. Write the equation of the straight line AB on the Cartesian plane



19. The area of a rectangular shaped land is 2817.5 m^2. Its breadth is 11.5 m. Find the length of the land.

20. Find the values of x and y based on the information in the figure.



Part - II

- Answer only 05 questions including question number 01.

(01)a. Remind the activity you did with your teacher in the class room during the circle lesson.

i. Write in steps the activity done to identify that the circle has an infinite number of axes of symmetry (05 marks)

ii. Draw a diagram to represent a sector of a circle and a segment of a circle. (04 marks)

b. i. Construct the triangle ABC, with side lengths AB = 7cm , BC=AC = 4.5 cm (05 marks)

ii. Classify the triangle you constructed above according to the sides and angles (02 marks)

iii. Measure the angles of the triangle and write their magnitudes. (02 marks)

(02)a. i. Draw a Cartesian plane with both the X-axis and y - axis marked from -5 to 5. (02 marks)

ii. Mark the following coordinates on it.
A(-4 , 2), B(2, 2), C(2,-2) , D(-4, -2) (04 marks)

iii. Draw the axes of symmetry of the figure obtained by joining that points. (03 marks)

iv. Write the equations of that axis of symmetry. (02 marks)

(03)a. The area of the rectangular shaped land is $29.75m^2$
If the breadth is 3.5 m , find the length of the land. (02 marks)

b. Simplify

i. $23\frac{3}{4} + \frac{1}{2}$ (03 marks)

ii. $2\frac{2}{5} \times 1\frac{1}{4}$ (03 marks)

iii. $3\frac{1}{2} \div 2\frac{1}{3}$ (03 marks)

(04)a. A= { prime numbers between 0 and 10}

i. Express the set A in two other ways. (02 marks)

ii. Find n(A) (01 marks)

iii. Write down an example for null set. (01 marks)

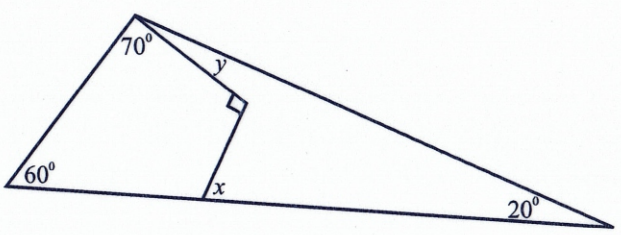
b. A father divides a certain amount of money among his son and daughter in the radio 2:3.
The amount received by the son is Rs. 3500/=

i. Write the fraction received by son (02 marks)

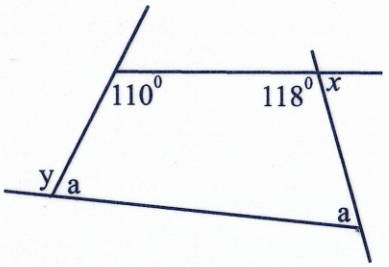
ii. Find the amount of money divided by the father. (03 marks)

iii. Find the amount received by daughter. (02 marks)

(05)a. Find the values of x and y based on the information in the figure. (02 marks)



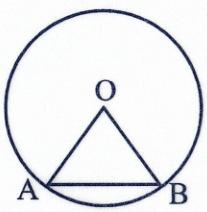
b. Find the values of a , x and y based on the information in the figure. (03 marks)



c. Answer the following questions based on the circle with center O.

i. Name a chord of the circle (02 marks)

ii. Redraw the circle by taking AB as the diameter. (04 marks)



(06) The length, breadth and height of a plastic container are 80 cm, 70 cm and 60 cm respectively. Small boxes of size 5cm x 3cm x 4 cm are packed in this container.

i. Find the volume of the plastic container and find its capacity. (04 marks)

ii. Draw a diagram shawing how the maximum number of small boxes should packed in the above plastic container. (04 marks)

iii. Find the number of boxes that can be packed accordingly. (03 marks)

(07) Informations on the number of chilli on the trees in a chilli plantation is given below.

40	20	32	36	37	29	25	30	28	33
32	18	10	19	27	38	28	15	32	32
37	26	28	25	33	20	34	30	40	25

i. Represent this data in a stem and leaf diagram (05 marks)

ii. Find the least number of chilli on a tree. (01 mark)

iii. Find the maximum number of chilli on a tree. (01 mark)

iv. Find the range of this data. (02 marks)

v. Find the mode. (01 mark)