

P.V.G.'s
Muktangan English School & Jr. College, Pune - 9
Annual Examination (2024-25)
STD VIII

Subject : Mathematics

Marks - 50

Date : 27.03.2025

Time : 8.00 am to 10.00 am

Q1. A) Fill in the blanks and rewrite the statements. (5)

1. If the radius of circle is 10 cm, then the diameter is _____ .
a) 10 cm b) 5 cm c) 20 cm
2. If $\frac{x}{5} = 15$, then $x =$ _____ .
a) 3 b) 75 c) 30
3. The degree of the polynomial $10x$ is _____ .
a) 0 b) 1 c) 2
4. $7b - 4b =$ _____ .
a) $4b$ b) $3b$ c) $11b$
5. If $\triangle ABC$ & $\triangle PQR$ are congruent in the correspondence $ABC \leftrightarrow PQR$, then it is written as _____ .
a) $\triangle ABC \cong \triangle PQR$ b) $\triangle ABC \sim \triangle PQR$ c) $\triangle ABC = \triangle PQR$

B) Write the following statements and state whether it is true or false.

1. $y = 1$ is the solution of $y+7 = 0$
2. Area of triangle = $\frac{1}{2}$ X base X height.
3. Mean of 3, 4 and 5 is 3.
4. $55m^2 \div 11m^2 = 5$
5. If the measure of two arcs of a circle are same, then the two arcs are congruent.

Q2. Attempt any six of the following.

(12)

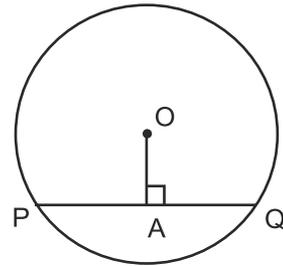
- The length of diagonals of rhombus are 15cm & 20cm. Find its area.
- If Principal (P) = ₹ 2000, Rate of interest (R) = 7 % p.a and Duration (in years) = 2 years. Find simple interest.
- Check whether $p = 2$ is the solution of the equation $2p + 3 = 7$.
- If radius of circle is 14 cm. Find its area by completing the activity.

Solution : Area of circle = (Formula)

$$= \frac{22}{7} \times \text{} \times \text{}$$

$$= \text{} \text{ Sq. cm}$$

- In the adjoining figure, O is the centre of the circle, seg PQ is a chord of length 7cm. If seg $OA \perp$ chord PQ, then find l(AP) by completing the activity.



Solution: seg $OA \perp$ chord PQ

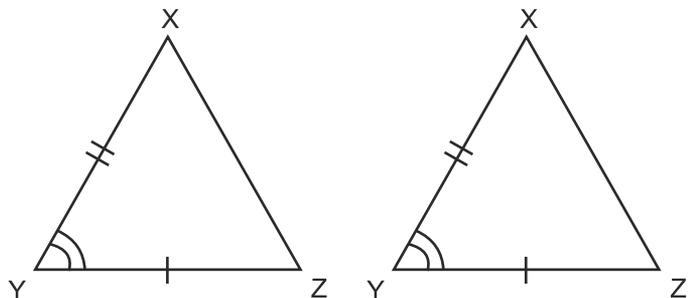
\therefore point A is of chord PQ

$$\therefore l(PA) = \frac{1}{2} \times \text{} \dots\dots \text{(The perpendicular drawn from the centre to its chord bisects the chord)}$$

$$= \frac{1}{2} \times \text{}$$

$$= \text{} \text{ cm}$$

- In the adjoining figure parts bearing identical marks are congruent. State the test and correspondence of the vertices by which the triangles are congruent.



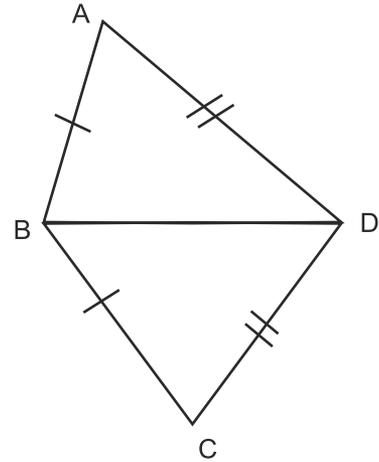
- Find the volume of a cylinder. Whose height is 10 cm and radius of base is 5cm (take $\pi = 3.14$)

Q3. Attempt any five of the following subquestions.

(15)

- If the sides of triangle are 17 cm, 25 cm and 26 cm. Find its area.
- In the adjoining figure sides of \square ABCD are shown by identical marks.

State the test by which $\triangle ABD$ & $\triangle CBD$ are congruent also write the pairs of congruent angles by completing the activity.



Solution : In $\triangle ABD$ & $\triangle CBD$

Side AB \cong Side

Side \cong Side CD

Side is common.

$\therefore \triangle ABD \cong \triangle CBD$ test.

Congruent angles :

$\angle ABD \cong$

$\angle ADB \cong \angle CDB$

$\cong \angle BCD$

- Length of two parallel sides of trapezium is 7 cm & 8 cm respectively and its height is 6 cm. Find its area.
- The amount of a certain principal is ₹ 6655 in 3 years, compounded annually at the rate of 10 p.c.p.a. Find the principal.
- Divide and write Quotient and remainder :

$$(4X^3 + 2X^2 + 3X - 300) \div (x-4)$$

- Solve : $2(x-3) = 3(x+5)$

Q4. Attempt any two of the following.

(8)

- The cost price of a machine is ₹ 2,50,000. If the rate of depreciation is 10 percent per year. Find the depreciation price of the machine after 2 years.
- The following table shows the electricity (in units) used by 25 families in the month of May. Complete the table and the following activity.

Electrically used (xi)	No. of families (fi)	fi X xi
30	7	<input type="text"/>
45	<input type="text"/>	90
60	<input type="text"/>	480
75	5	<input type="text"/>
<input type="text"/>	3	270
	N = 25	<input type="text"/>

$$X = \frac{\sum fi xi}{N} = \frac{\text{}}{25} = \text{$$

- A zinc sheet is of length 3.3 m and breadth 3m. How many pipes of length 30 cm and radius 3.5 cm can be made from this sheet?

Q5. Attempt any one of the following.

(5)

- The number of boys and girls of std 8 are given in a table. Draw a subdivided bar graph to show the data.

Division	A	B	C	D
Boys	17	19	15	18
Girls	34	20	15	36

- Show the following information by drawing percentage bar graph.

Town	Karjat	Wadgaon	Shivapur
Trees survived	42	45	45
Total trees	60	75	90

