



VIVEK TUTORIALS

X (English)

(Special Test)

Mathematics Part - II-(4)

DATE: 21-02-19

TIME: 50 Mins

MARKS: 30

SEAT NO:

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Q.1 Solve the following (IX)

2

- 1 In each of the following, decide whether the relation of between ness exists among the points A, B and D. Name the point which lies between the other two. $d(A, B) = 5$, $d(B, D) = 8$, $d(A, D) = 11$

Ans $d(A, B) + d(B, D) = 5 + 8 = 13$

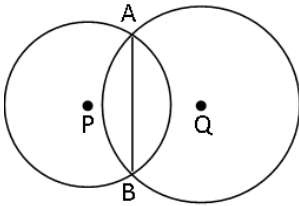
$d(A, D) = 11$

$\therefore d(A, B) + d(B, D) \neq d(A, D)$

\therefore The relation of between them does not exist among the points A, B & D.

- 2 If two intersecting circles with two points in common are drawn then how many common chords can be drawn? Draw the figure and write the answer.

Ans



One and only common chord can be drawn.

Q.2 Attempt the following (IX)

4



Write answer to the following question from above fig.

- a) 'Write intersection of ray NS and ray NM'.
b) State the rays of which seg RO is a subset.

Ans .

- 2 How many lines are there which are parallel to x-axis and having a distance 5 units from it?

Ans .

Q.3 Multiple Choice Questions

2

- 1 How many common tangents can be drawn to two circles, touching each other externally?
a. One b. Two c. Three d. Four

Ans Three common tangents can be drawn to two circles, touching each other externally.

- 2 If $\Delta ABC \sim \Delta PQR$ and $\frac{AB}{PQ} = \frac{7}{5}$, then

- a. ΔABC is bigger. b. ΔPQR is bigger. c. Both triangles will be equal. d. Cannot be decided.

Ans Option a

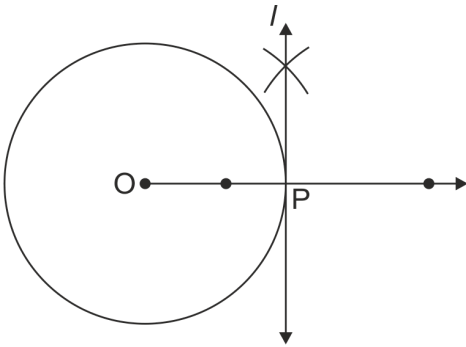
Q.4 Answer the following

2

1 Complete the following activity to draw a tangent to a circle at a point on the circle.

- Draw a circle of radius 2.2 cm with O as centre.
- Take any point P on the circle and draw ray OP.
- Draw a perpendicular line to the ray at point P.
- Name the perpendicular line as l .
 l is the tangent at point P.

Ans

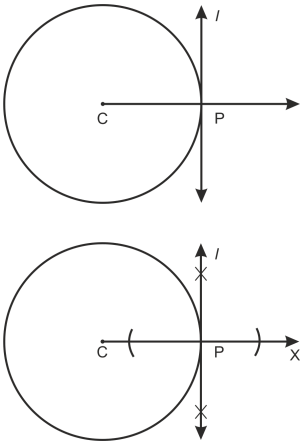


Q.5 Solve the following

6

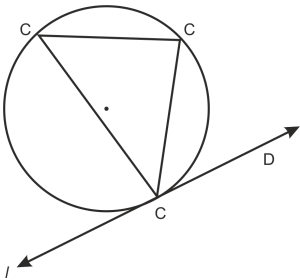
1 Construct a tangent to a circle using the centre of the circle.

Ans

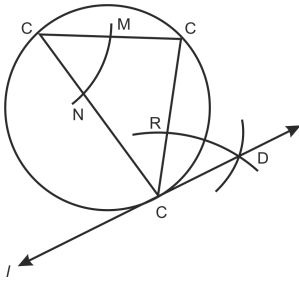


2 Construct a tangent to the circle without using centre of the circle.

Ans



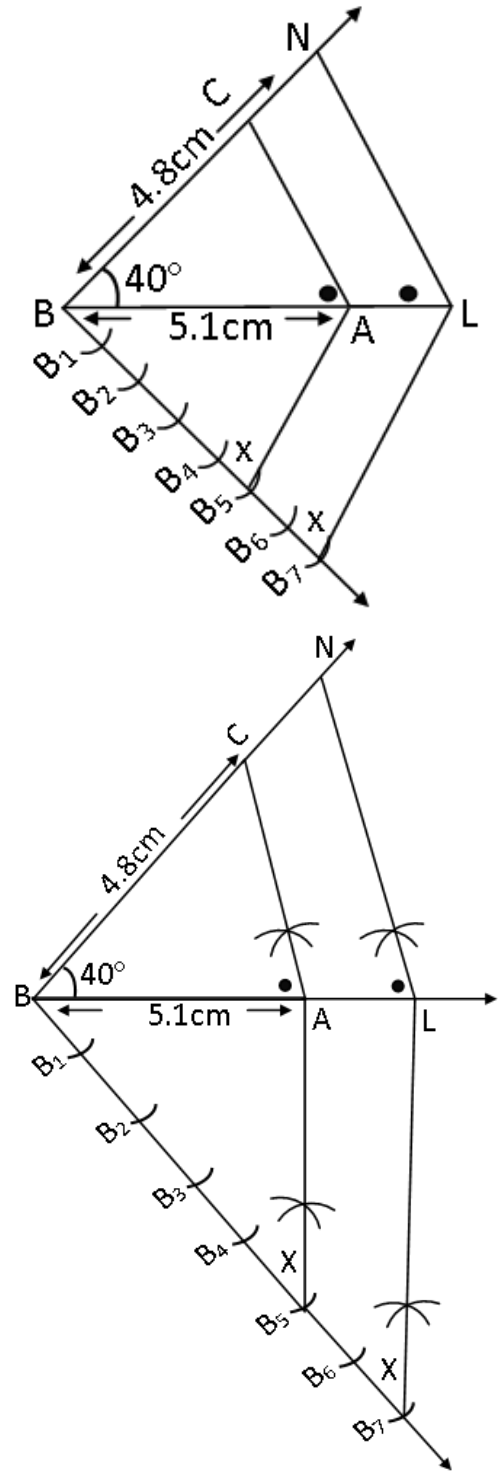
As shown in the figure, let line l be the tangent to the circle at point C. Line CB is a chord and $\angle CAB$ is an inscribed angle. Now by tangent- secant angle theorem, $\angle CAB \simeq \angle BCD$.



Q.6 Answer the following

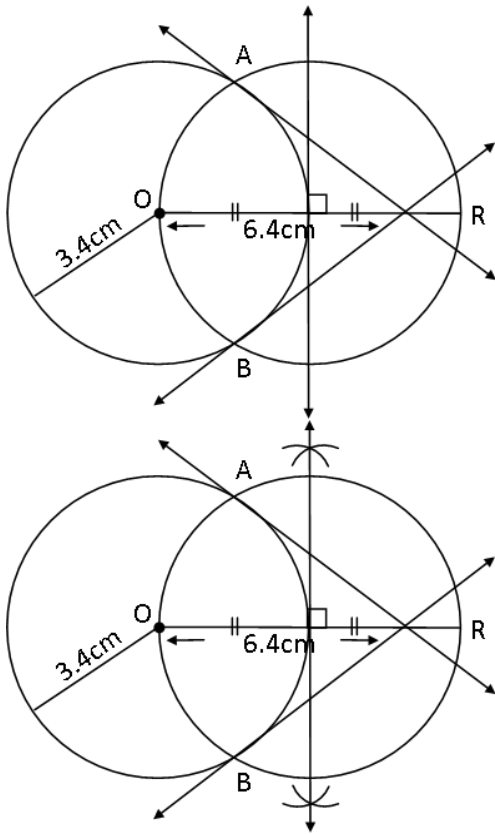
1 $\triangle ABC \sim \triangle LBN$. In $\triangle ABC$, $AB = 5.1 \text{ cm}$, $\angle B = 40^\circ$, $BC = 4.8 \text{ cm}$, $\frac{AC}{LN} = \frac{4}{7}$. Construct $\triangle ABC$ and $\triangle LBN$.

Ans



- 2 Draw a circle of diameter 6.4 cm. Take a point R at a distance equal to its diameter from the centre. Draw tangents from point R.

Ans $\therefore d = 6.4 \text{ cm} \quad \therefore r = \frac{d}{2} = \frac{6.4}{2} = 3.2 \text{ cm}.$



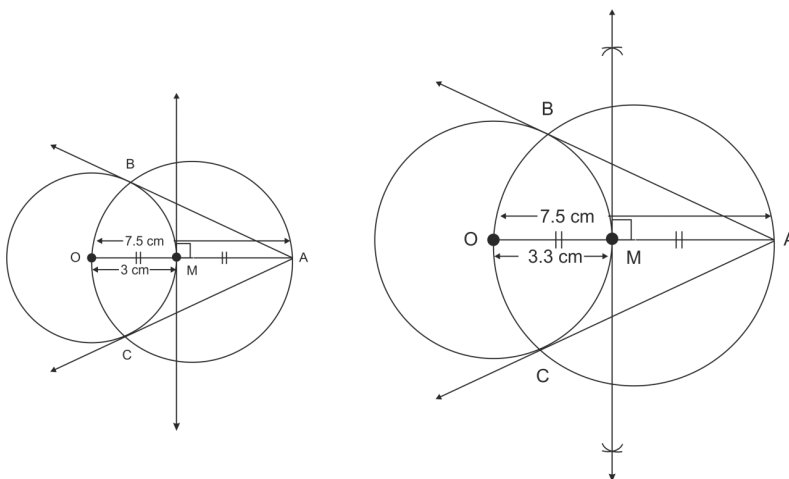
Line RA and line RB are required tangents.

Q.7 Answer the following

6

- 1 Draw a tangent to the circle with centre 'O' and radius 3.3 cm from a point A such that $d(O, A) = 7.5 \text{ cm}$. Measure the length of tangent segments.

Ans



Line AB and AC are the required tangents.

- 2 Draw a circle with centre P and radius 3.1 cm. Draw a chord MN of length 3.8 cm. Draw tangents to the circle through points M and N.

Ans

