MATHS

NCERT - NCERT MATHEMATICS(BENGALI ENGLISH)

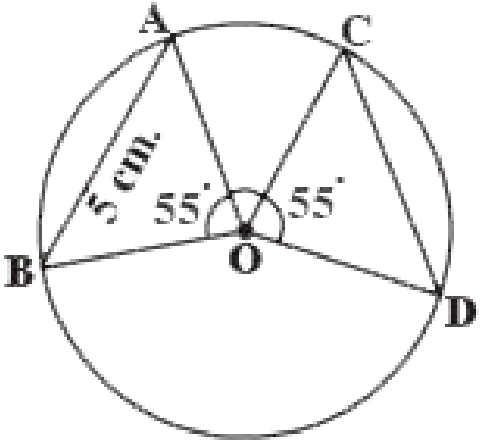
CIRCLES

Example

1. Construct a circumcircle of the triangle ABC where AB = 5cm, $\angle B = 75^\circ$ and BC = 7cm

Watch Video Solution

2. In the figure, O is the centre of the circle. Find the length of CD, if AB = 5 cm.

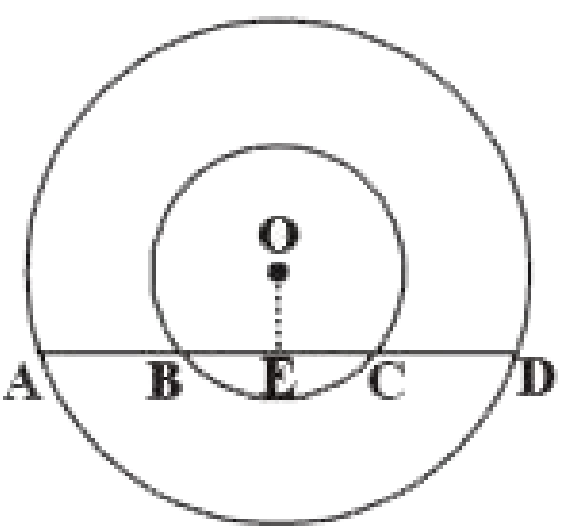


Watch Video Solution

3. In the adjacent figure, there are two concentric circles with centre 'O'.

Chord AD of the bigger circle intersects the smaller circle at B and C.

Show that AB = CD.



Watch Video Solution

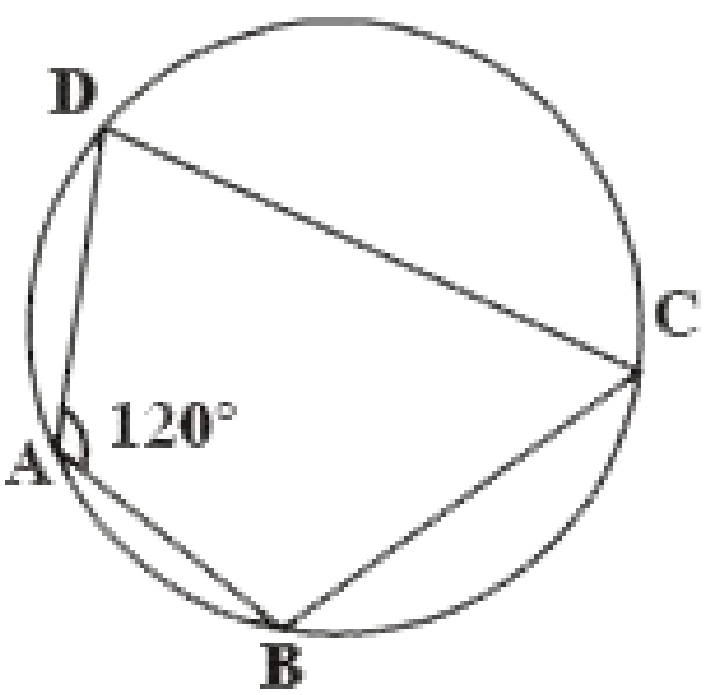
4. Let 'O' be the centre of a circle, PQ is a diameter, then prove that $\angle PRQ = 90^\circ$ (OR) Prove that angle in a semi-circle is right angle.

Watch Video Solution

5. Perimeter of a semi circle is 36cm, find its area.

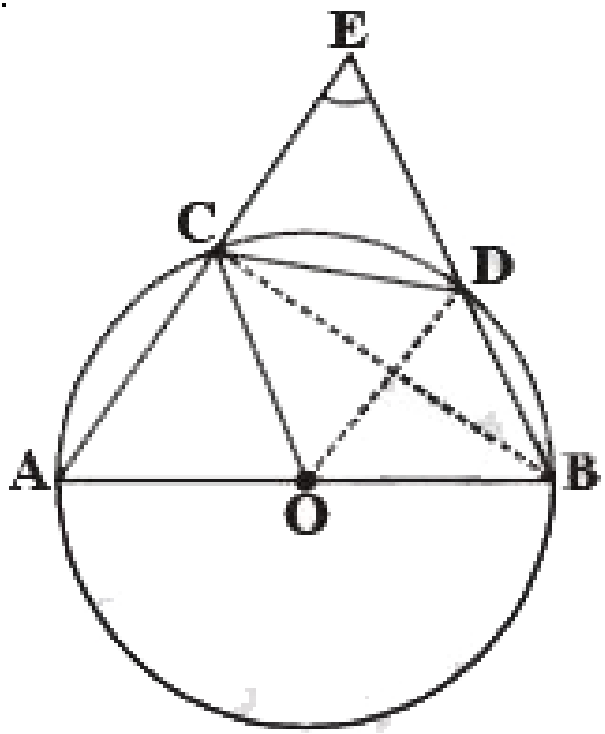
Watch Video Solution

6. In the figure, $\angle A = 120^\circ$ then find $\angle C$?



Watch Video Solution

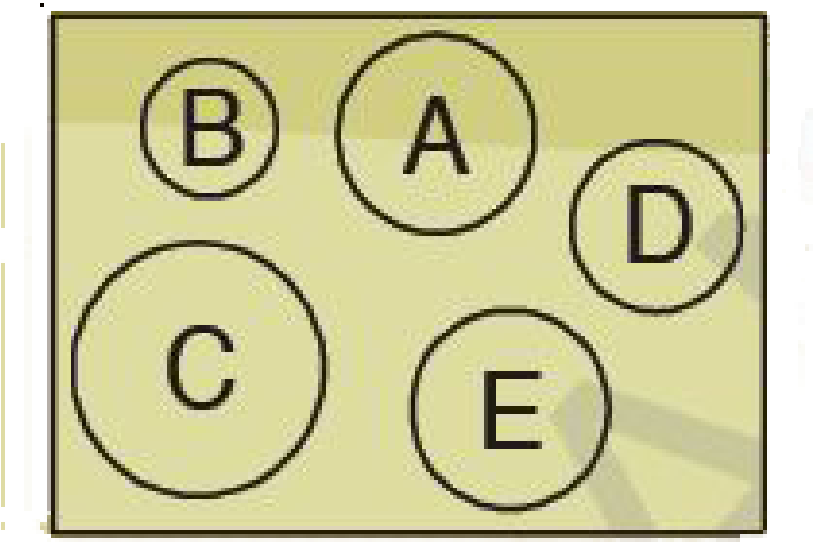
7. In figure, $\overline{AB}$ is a diameter of the circle, $\overline{CD}$ is a chord equal to the radius of the circle. $\overline{AC}$ and $\overline{BD}$ when extended intersect at a point E. Prove that $\angle AEB = 60^\circ$.



Watch Video Solution

Do This

1. In the figure, which circles are congruent to the circle A?



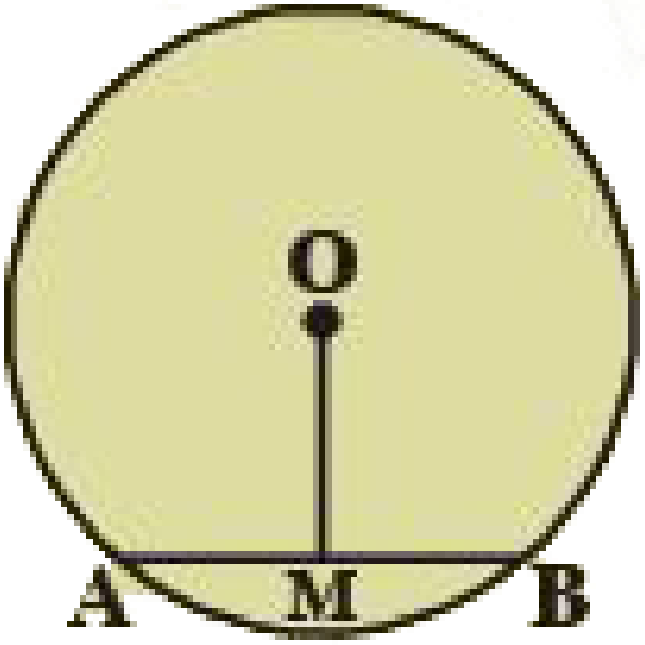
Watch Video Solution

2. What measure of the circles make them congruent?

Watch Video Solution

Try This

1. In a circle with centre 'O' . $\overline{AB}$ is a chord and 'M' is its midpoint . Now prove that $\overline{OM}$ is perpendicular to AB



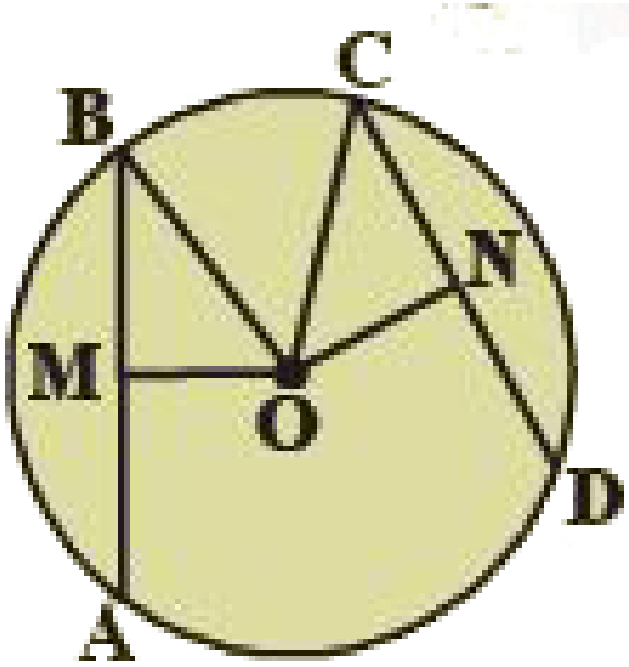
Watch Video Solution

2. if three points are collinear , how many circles can be drawn through these points? Now, try to draw a circle passing through these three

points.

Watch Video Solution

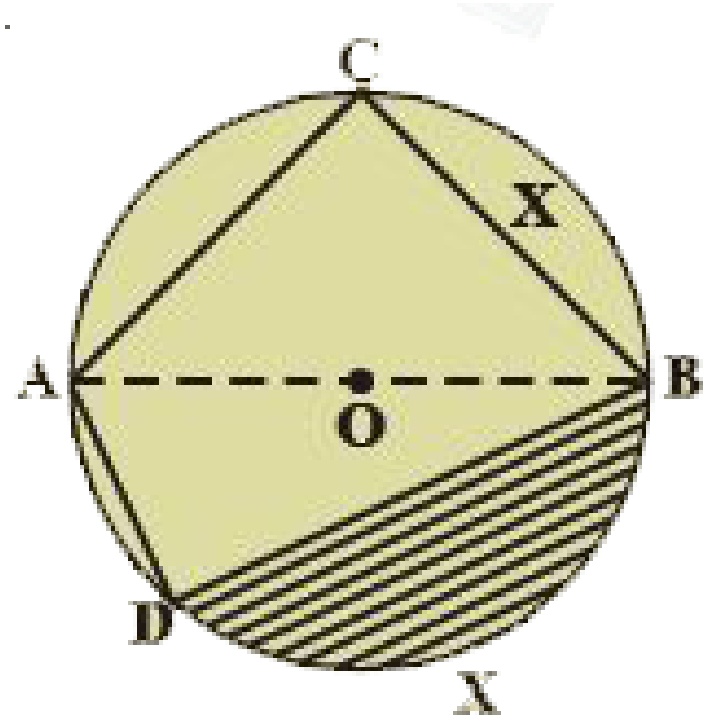
3. In the figure, O is the centre of the circle and AB = CD. OM is perpendicular on $\overline{AB}$ and $\overline{ON}$ is perpendicular on $\overline{CD}$. Then prove that OM = ON.



Watch Video Solution

Exercise 12 1

1. Name the following parts from the adjacent figure where 'O' is the centre of the circle



$(i)\overline{AO}(ii)\overline{AB}(iii) \frown (BC)(iv)\overline{AC}(v) \frown (DCB)(vi) \frown (ACB)(vi)\overline{AD}$

(viii) shadedregion

Watch Video Solution

2. State true or false .

A circle divides the plane on which it lies into three parts.

Watch Video Solution

3. State true or false .

The region enclosed by a chord and the minor arc is minor segment

Watch Video Solution

4. State true or false .

The region enclosed by a chord and the major arc is major segment

Watch Video Solution

5. State true or false .

A diameter divides the circle into two unequal parts.

Watch Video Solution

6. State true or false .

A sector is the area enclosed by two radii and a chord

Watch Video Solution

7. State true or false .

The longest of all chords of a circle is called a diameter.

Watch Video Solution

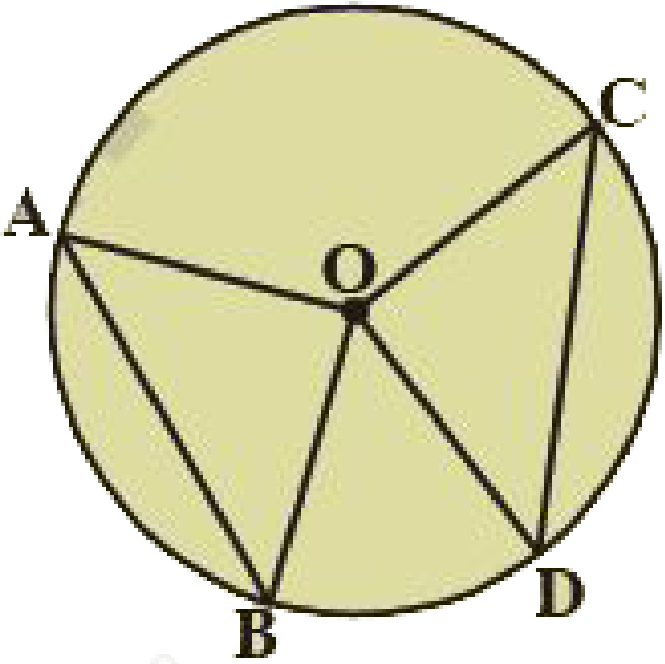
8. State true or false .

The mid point of any diameter of a circle is the centre.

Watch Video Solution

Exercise 12 2

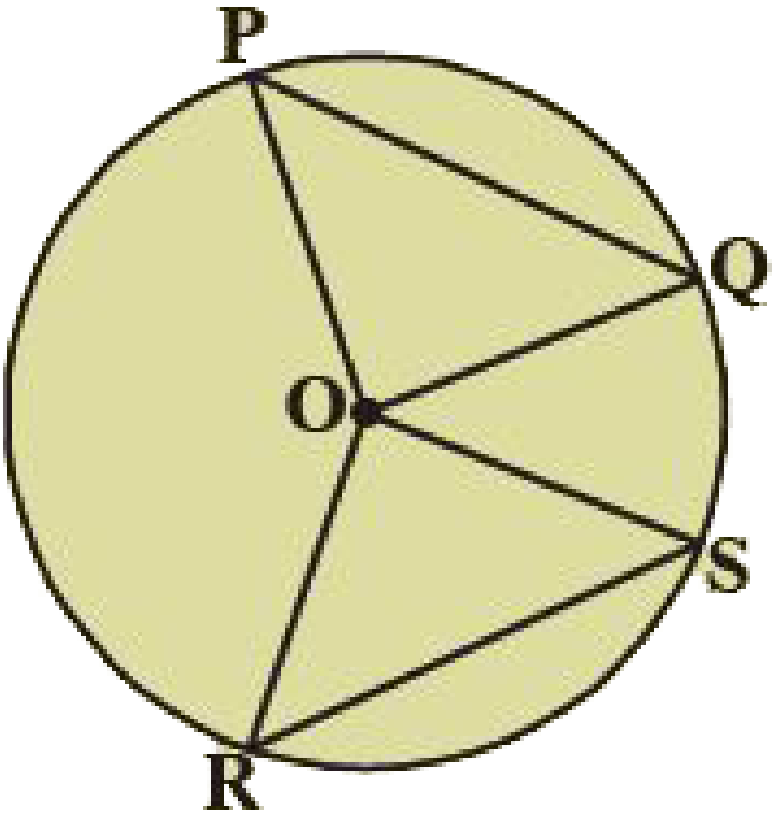
1. In the figure , if AB = CD and $\angle AOB = 90^\circ$ find $\angle COD$



Watch Video Solution

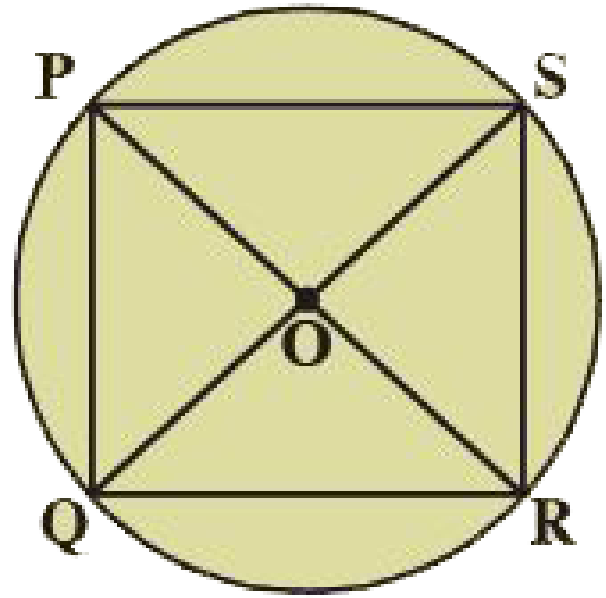
2. In the figure , PQ = RS and $\angle ORS = 48^\circ$. Find $\angle OPQ$ and $\angle ROS$

.



Watch Video Solution

3. In the figure PR and QS are two diameters. Is PQ = RS?



Watch Video Solution

Exercise 12 3

1. Draw the following triangle.

In ΔABC, $AB = 6cm$, $BC = 7cm$ and $\angle A = 60^\circ$

Watch Video Solution

2. Draw the following triangles .

in $\Delta PQR, PQ = 5cm, QR = 6cm$ and $RP = 8.2cm$

Watch Video Solution

3. Draw the following triangle

In $\Delta XYZ, XY = 4.8cm, \angle X = 60^\circ$ and $\angle Y = 70\& \circ$

Watch Video Solution

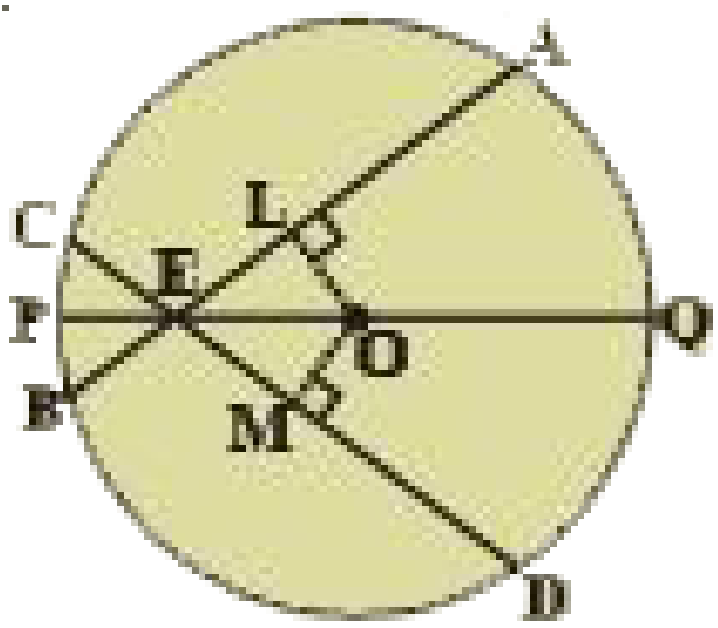
4. Draw circle passing through A, B where AB = 5.4cm

Watch Video Solution

5. If two circles intersect at two points, then prove that their centres lie on the perpendicular bisector of the common chord.

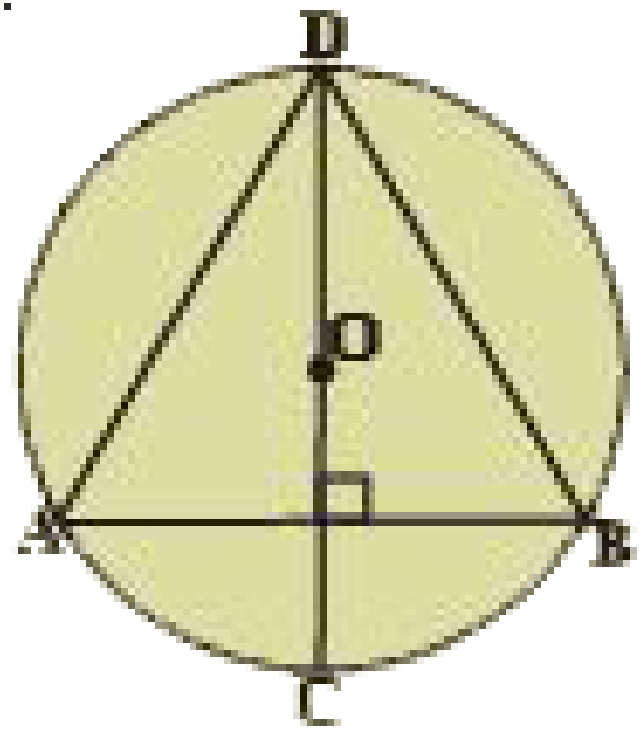
Watch Video Solution

6. If two intersecting chords of a circle make equal angles with diameter passing through their point of intersection, prove that the chords are equal.



Watch Video Solution

7. In the adjacent figure, AB is a chord of circle with centre O. CD is the diameter perpendicualr to AB. Show that AD = BD

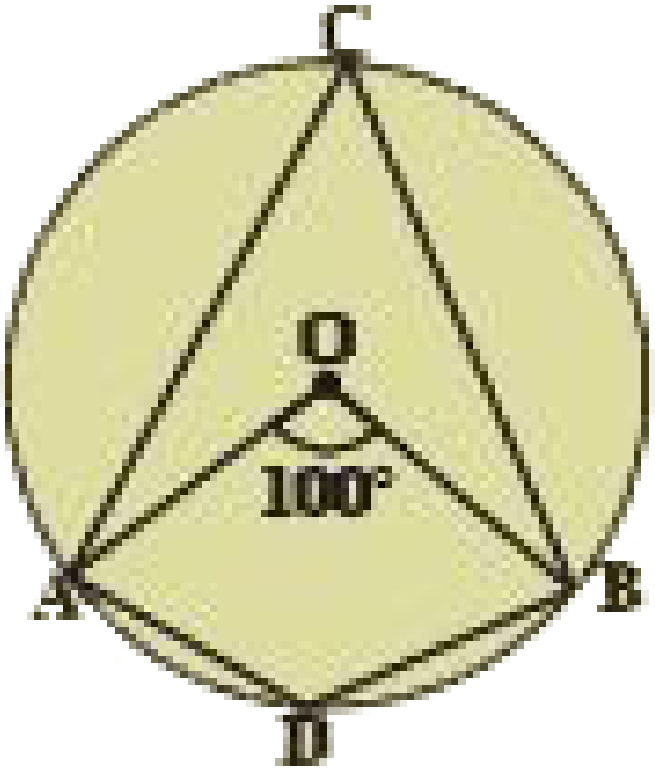


Watch Video Solution

Exercise 12 4

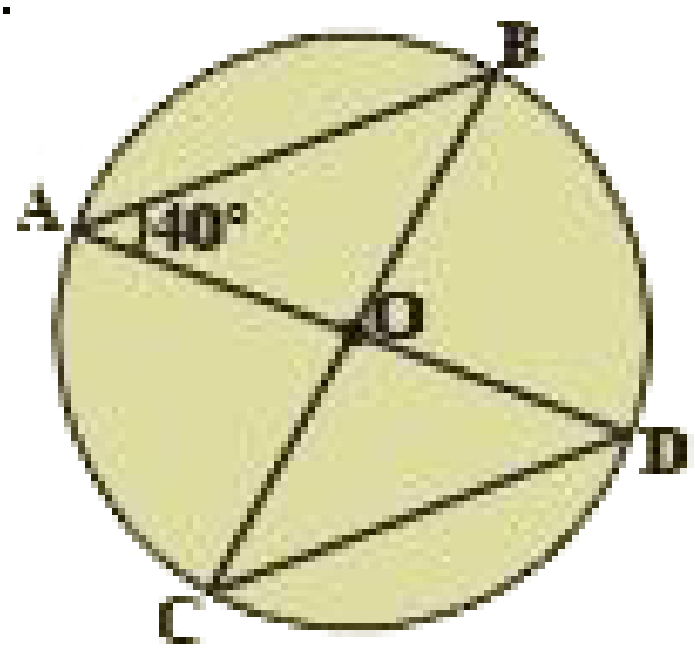
1. In the figure 'O' is the centre of the circle

$\angle AOB = 100^\circ$ find $\angle ADB$



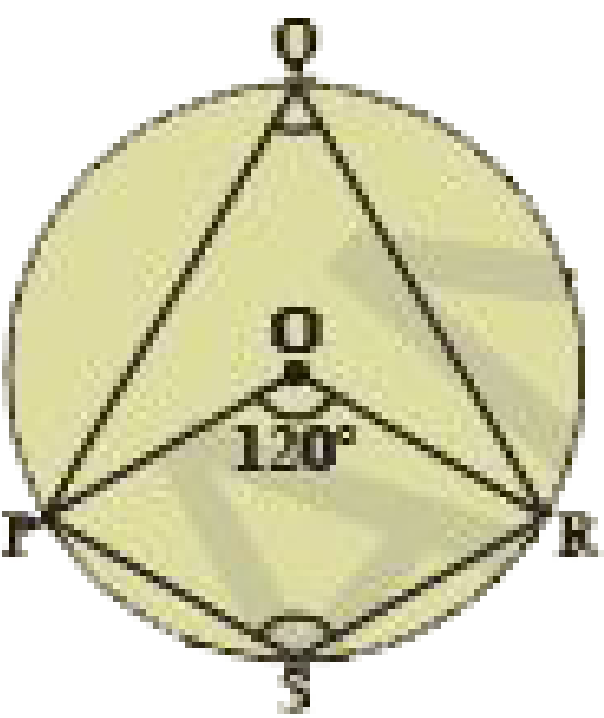
Watch Video Solution

2. In the figure $\angle BAD = 40^\circ$ then find $\angle BCD$



Watch Video Solution

3. In the figure , O is the centre of the circle and $\angle POR = 120^\circ$. Find $\angle PQR$ and $\angle PSR$



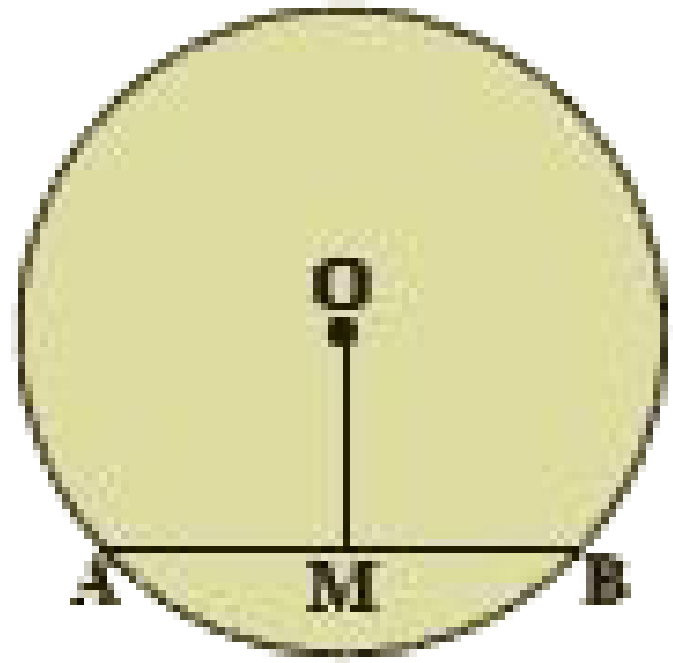
Watch Video Solution

4. If a parallelogram is cyclic, then it is a rectangle. Justify.

Watch Video Solution

5. In the figure, 'O' is the centre of the circle. OM = 3cm and AB = 8cm.

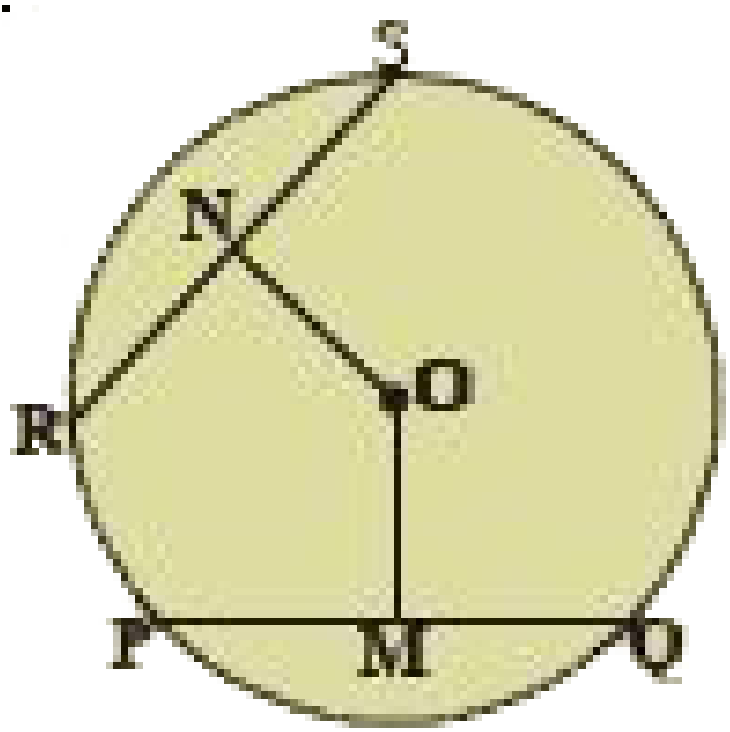
Find the radius of the circle



Watch Video Solution

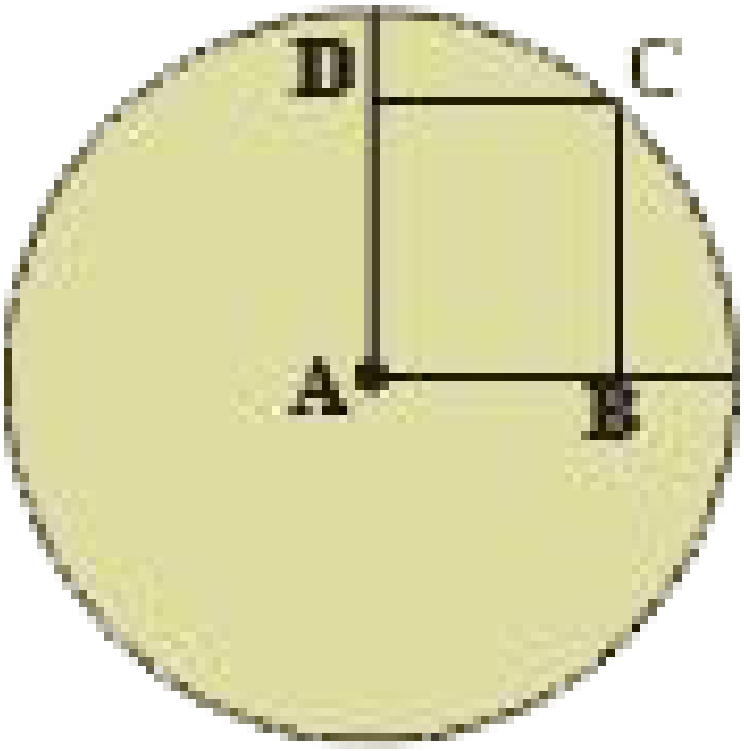
6. In the figure, 'O' is the centre of the circle and OM, ON are the perpendiculars from the centre to the chords PQ and RS. If OM = ON

and PQ = 6cm. Find RS



Watch Video Solution

7. A is the centre of the circle and ABCD is a square. If BD = 4cm then find the radius of the circle

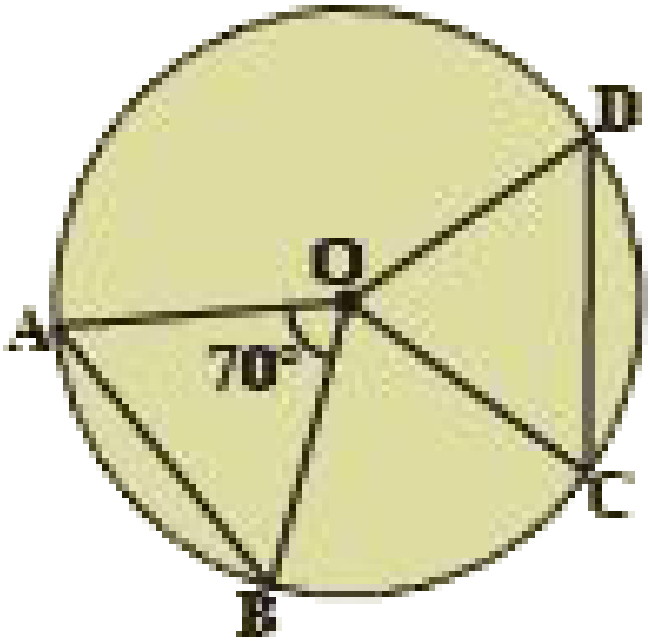


Watch Video Solution

8. Draw a circle with any radius and then draw two chords equidistant from the centre

Watch Video Solution

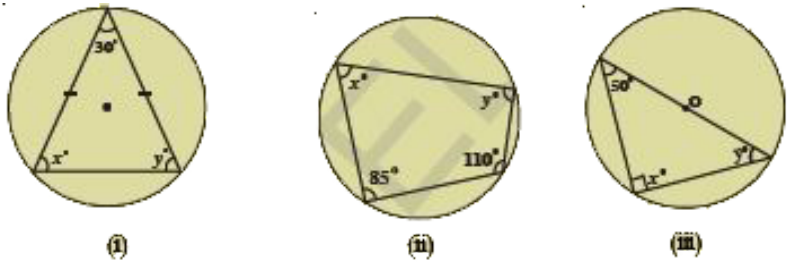
9. In the given figure 'O' is the centre of the circle and AB, CD are equal chords. If $\angle AOB = 70^\circ$. Find the angles of the ΔOCD



Watch Video Solution

Exercise 12 5

1. Find the values of x and y in the figures given below



Watch Video Solution

2. Given that the vertices A, B, C of a quadrilateral ABCD lie on a circle. Also $\angle A + \angle C = 180^\circ$, then prove that the vertex D also lie on the same circle.

Watch Video Solution

3. Prove that a cyclic rhombus is a square

Watch Video Solution

4. Diameter of a circle is 14, find its area and perimeter.

Watch Video Solution

5. Perimeter of a semi circle is 36cm, find its diameter.

Watch Video Solution