



MATHS

BOOKS - NAND LAL PUBLICATION

CIRCLES

Exercise 10 1

1. How many tangents can a circle have ?



[Watch Video Solution](#)

2. Fill in the blanks : A line intersecting a circle in two points is called a...



Watch Video Solution

3. Fill in the blanks : A circle can have..... parallel tangents at the most.



Watch Video Solution

4. Fill in the blanks : The common point of a tangent to a circle and the circle is called.....



[Watch Video Solution](#)

5. A tangent PQ at a point P of a circle of radius 5 cm meets a line through the centre O at a point Q so that $OQ = 12$ cm. Length PQ is:

A. 12cm

B. 13cm

C. 8.5cm

D. $\sqrt{119}$ cm

Answer: D



Watch Video Solution

6. Draw a circle and two lines parallel to a given line such that one is a tangent and other a secant to the circle



Watch Video Solution

Exercise 10 2

1. From a point Q , the length of the tangent to a circle is 24 cm and the distance of Q from the centre is 25 cm. The radius of the circle is

A. 7cm

B. 12cm

C. 15cm

D. 24.5cm

Answer: A



Watch Video Solution

2. If tangents PA and PB from a point P to a circle with centre O are inclined to each other at angle of 80° , then $\angle POA$ is equal to

A. 50°

B. 60°

C. 70°

D. 80°

Answer: A



[Watch Video Solution](#)

3. Prove that the tangents drawn at the ends of a diameter of a circle are parallel.



[Watch Video Solution](#)

4. Prove that the perpendicular at the point of contact to the tangent to a circle passes through the centre.



[Watch Video Solution](#)

5. The length of a tangent from a point A at distance 5 cm from the centre of the circle is 4 cm. Find the radius of the circle.



[Watch Video Solution](#)

6. Two concentric circles are of radii 5 cm and 3 cm. Find the length of the chord of the larger circle which touches the smaller circle.



[Watch Video Solution](#)

7. A quadrilateral ABCD is drawn to circumscribe a circle (see Fig). Prove that

$$AB + CD = AD + BC$$

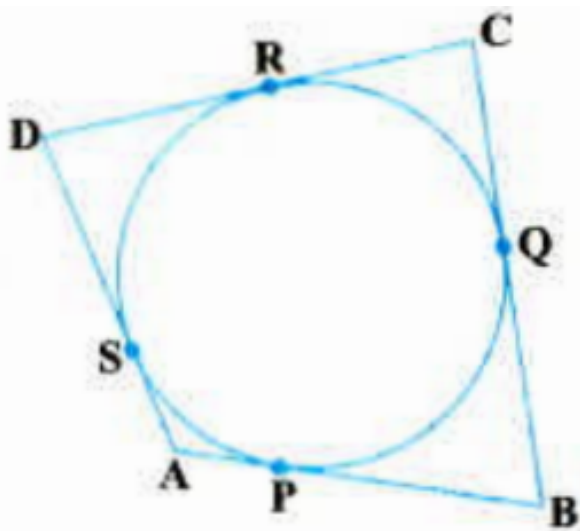


Fig. 10.12



Watch Video Solution

8. In Fig, 10.13, XY and $X'Y'$ are two parallel tangents to a circle with centre O and another tangent AR with point of contact C intersecting XY at A and $X'Y'$ at B . Prove that $\angle AOB = 90^\circ$.

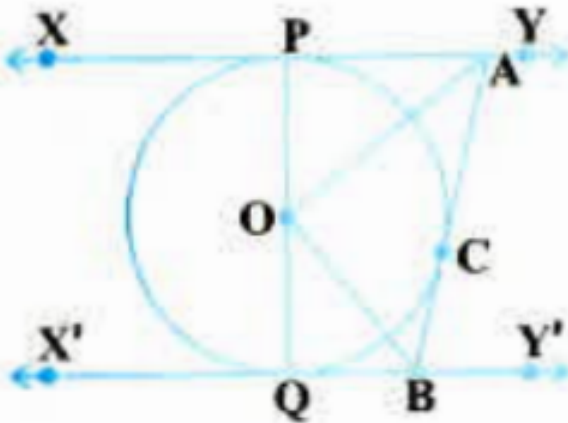


Fig. 10.13



Watch Video Solution

9. Prove that the angle between the two tangents drawn from an external point to a circle is supplementary to the angle subtended by the line segment joining the points of contact at the centre.



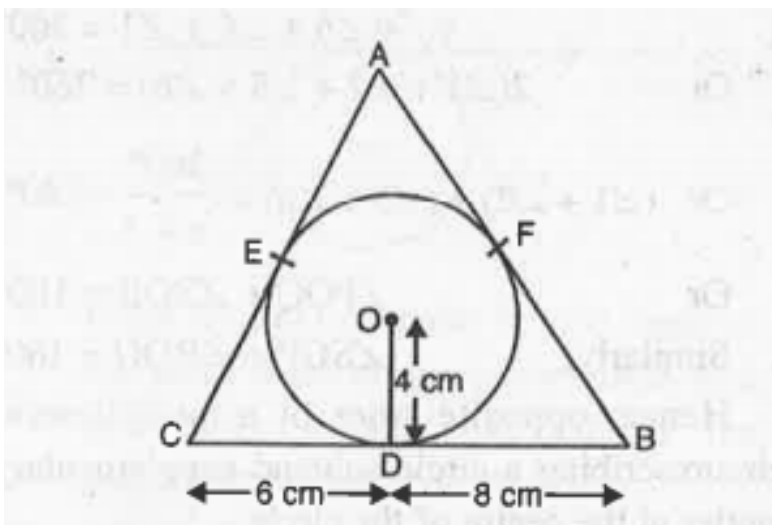
[Watch Video Solution](#)

10. Prove that the parallelogram circumscribing a circle is a rhombus.



[Watch Video Solution](#)

11. A triangle ABC is drawn to circumscribe a circle of radius 4 cm such that the segments BD and DC into which BC is divided by the point of contact D are of lengths 8 cm and 6 cm respectively (see Fig). Find the sides AB and AC.





[Watch Video Solution](#)

12. Prove that opposite sides of a quadrilateral circumscribing a circle subtend supplementary angles at the centre of the circle.



[Watch Video Solution](#)