

Exercise 10.1

1. How many tangents can a circle have?

Sol. A circle can have infinitely many tangents.

2. Fill in the blanks:

(i) A tangent to a circle intersects it in _____ point(s).

(ii) A line intersecting a circle in two points is called a _____.

(iii) A circle can have _____ parallel tangents at the most.

(iv) The common point of a tangent to a circle and the circle is called _____.

Sol. (i) one (ii) secant
(iii) two (iv) point of contact.

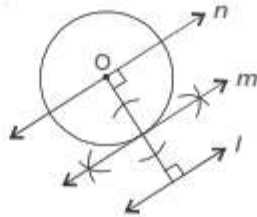
3. A tangent PQ at a point P of a circle of radius 5 cm meets a line through the centre O at a point Q so that $OQ = 12$ cm. Length PQ is:

(A) 12 cm (B) 13 cm (C) 8.5 cm (D) $\sqrt{119}$ cm.

Sol. (D).

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

Sol.



Here l is the given line. m and n are respectively, a tangent and a secant to a given circle with centre O and parallel to line l .