

Circles

10th Maths - Chapter 10

This is Problem-3 from Exercise 1

1. 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

Solution: Given,

$$\mathbf{OP} = 5cm \quad (1)$$

$$\mathbf{OQ} = 12cm \quad (2)$$

As **OP** \perp **PQ** then **OPQ** forms as a right triangle

$$\mathbf{OQ}^2 = \mathbf{OP}^2 + \mathbf{PQ}^2 \quad (3)$$

$$\mathbf{PQ}^2 = 144 - 25 \quad (4)$$

$$\mathbf{PQ} = \sqrt{119} \quad (5)$$

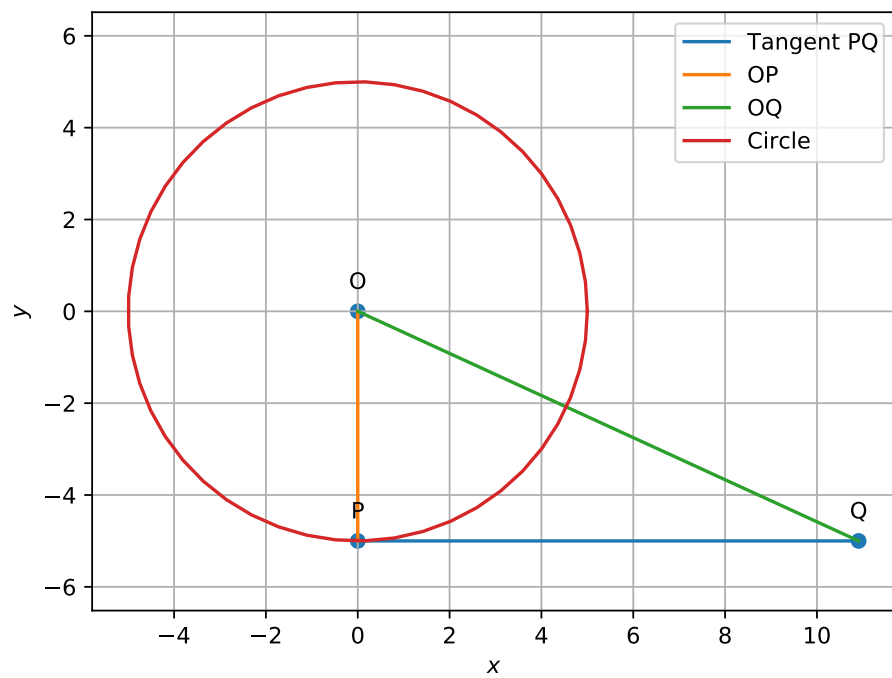


Figure 1