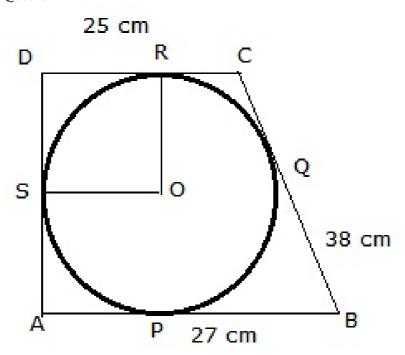


Exercise 12

Question 9:



Join OR and OS, then OR = OS

OR \perp DR and OS \perp DS

:. ORDS is a square

Tangents from an external point being equal, we have

BP = BQ

CQ = CR

DR = DS

 \therefore BQ = BP = 27 cm

 \Rightarrow BC - CQ = 27 cm

 \Rightarrow 38 - CQ = 27

 \Rightarrow CQ = 11 cm

 \Rightarrow CR = 11 cm

⇒ CD - DR = 11 cm

⇒ 25 - DR = 11 cm

⇒ DR = 14 cm

 \Rightarrow r = 14 cm

Hence, radius = 14 cm

********* END *******