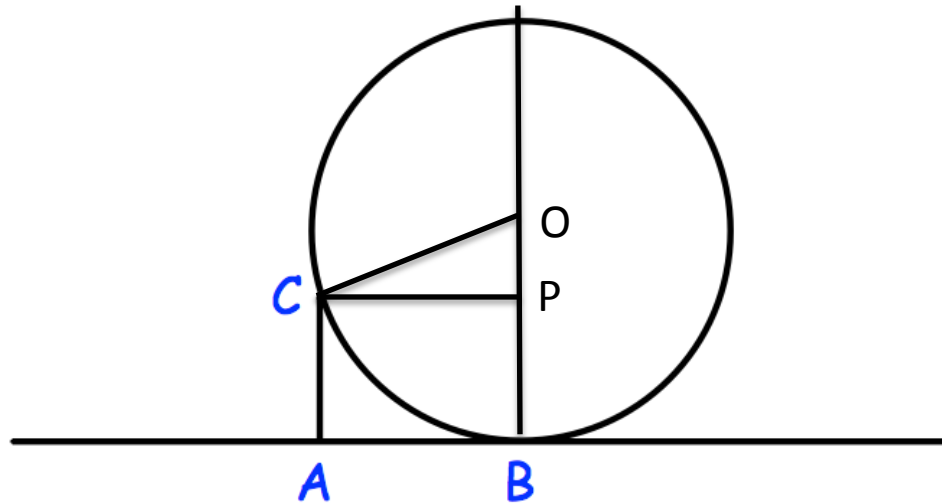


December 26th

AB is a tangent to the circle.

Angle BAC is 90° , AC = 6cm and AB = 18cm.

Find the radius of the circle.



In triangle OPC

$$PC = AB = 18$$

$$OC = r$$

$$OP = r - 6$$

Pythagoras gives

$$r^2 = (r - 6)^2 + 18^2$$

Hence

$$r^2 = r^2 - 12r + 360$$

Therefore

$$12r = 360$$

So the radius = **30cm**

