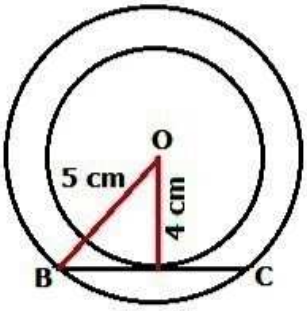
ex 9.1, exemplar ×

① $OB^2 = OC^2 + BC^2$ (pythagoras theorem)



$5^2 = 4^2 + BC^2$

$\Rightarrow BC^2 = 25 - 16$

$BC = \sqrt{9}$

$= 3$ cm

$BD = 2BC$

$= 2 \times 3$

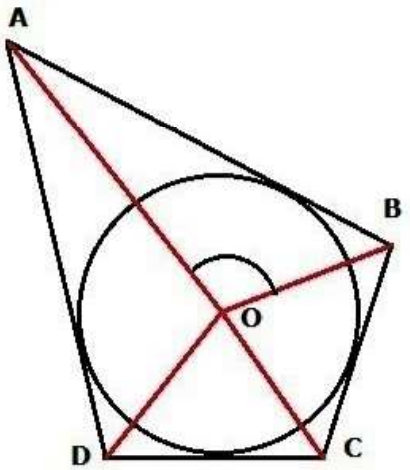
$= 6$ cm (B)

② $\angle AOB + \angle COD = 180^\circ$

$125 + \angle COD = 180$

$\Rightarrow \angle COD = 180^\circ - 125^\circ$

$= 55^\circ$ (D)



③ $\angle B = 90^\circ$ [angle in semi ⊙]

$\angle CAB = \angle B - \angle BCA$ [angle sum prop of △]

$= 90^\circ - 50^\circ$

$= 40^\circ$

$\angle BAT = \angle CAT - \angle CAB$ [$\angle CAT = 90^\circ$ (angle between r and tangent)

$= 90^\circ - 40^\circ$

$= 50^\circ$ (C)