

1. In the given figure, PQ is tangent to the circle centred at O . If $\angle AOB = 95^\circ$, then the measure of $\angle ABQ$ will be.

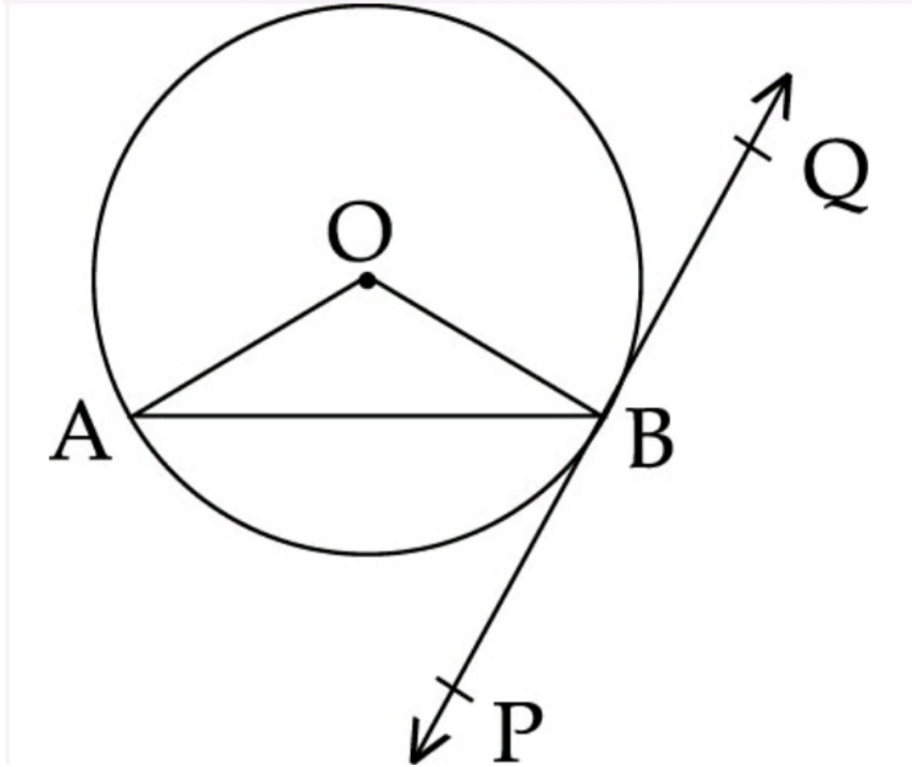


Figure 1:

- (a) 47.5°
 (b) 42.5°
 (c) 85°
 (d) 95°
2. (a) Two tangents TP and TQ are drawn to a circle with center O from an external point T . prove that $\angle PTQ = 2\angle OPQ$.

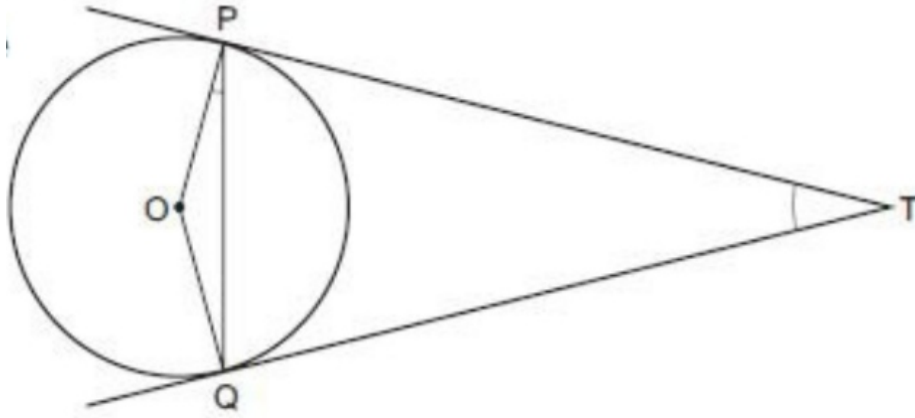


Figure 2:

(b) In the given figure, a circle is inscribed in a quadrilateral $ABCD$ in which $\angle B = 90^\circ$. If $AD = 17\text{cm}$, $AB = 20\text{cm}$ and $DS = 3\text{cm}$, then find the radius of circle.

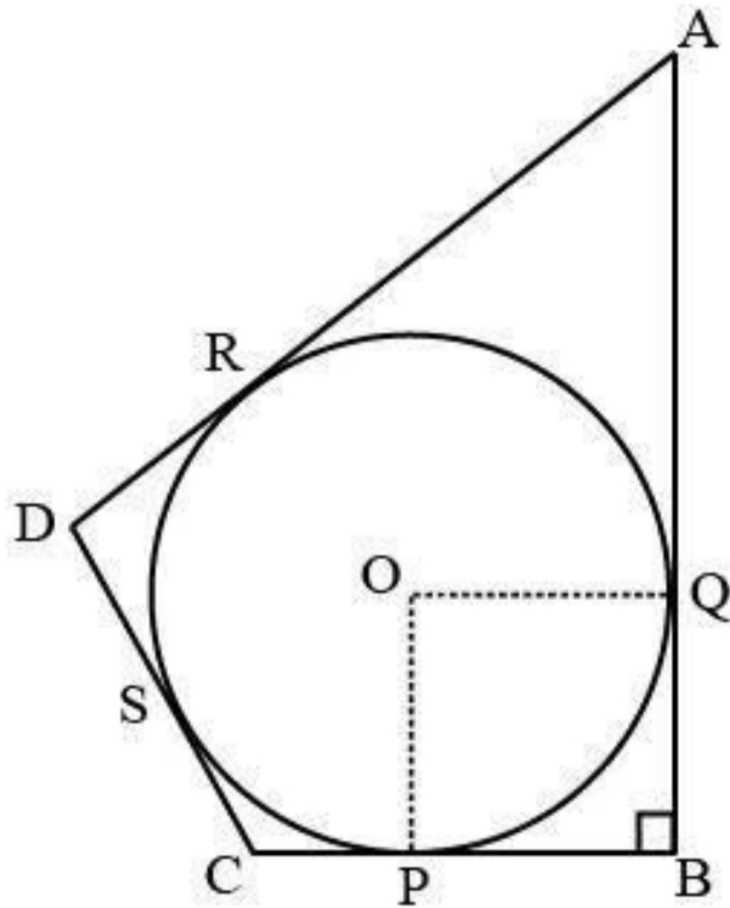
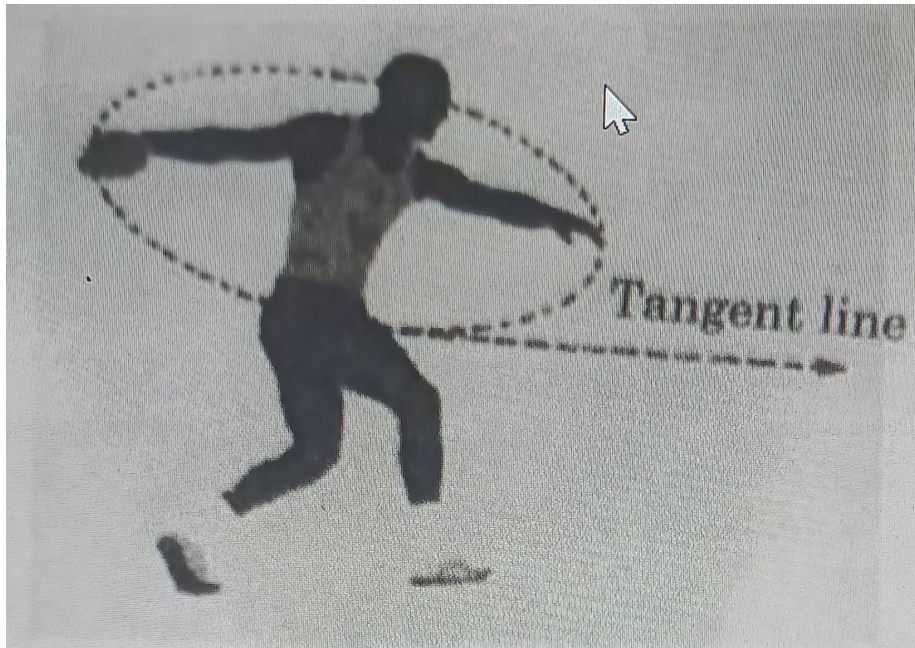


Figure 3:

3. The discus throw is an event in which an athlete attempts to throw a discus. The athlete spins anti-clockwise around one and a half times through a circle, Then the throw. When released, The discus travels along the tangent to the circular spin orbit.



In the given figure, AB is one such tangent to a circle of radius 75 cm. Point O is center of the circle and $\angle AOB = 30^\circ$. PQ is parallel to OA .

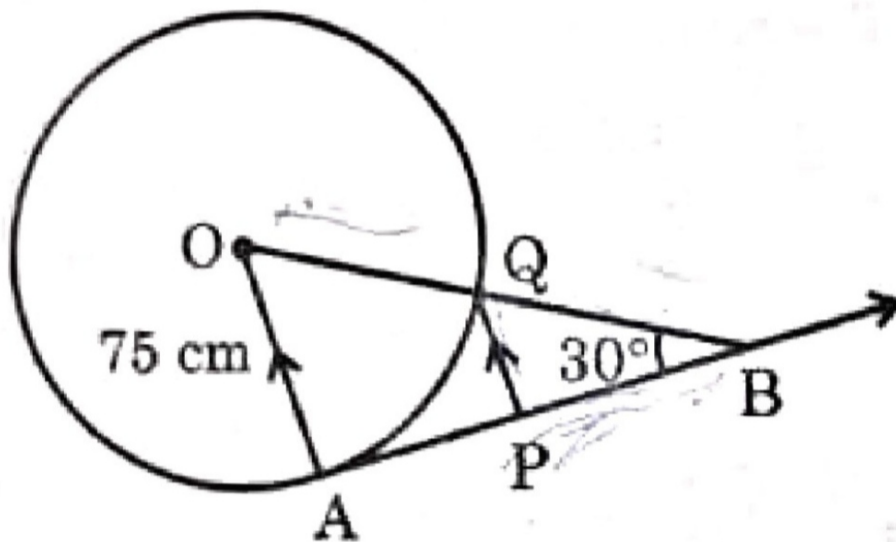


Figure 4:

Based on above information :

- (a) find the length of AB .
 (b) find the length of OB .
 (c) find the length of PQ .
4. In the given figure, The quadrilateral $PQRS$ circumscribes a circle. Here $PA + CS$ is equal to :

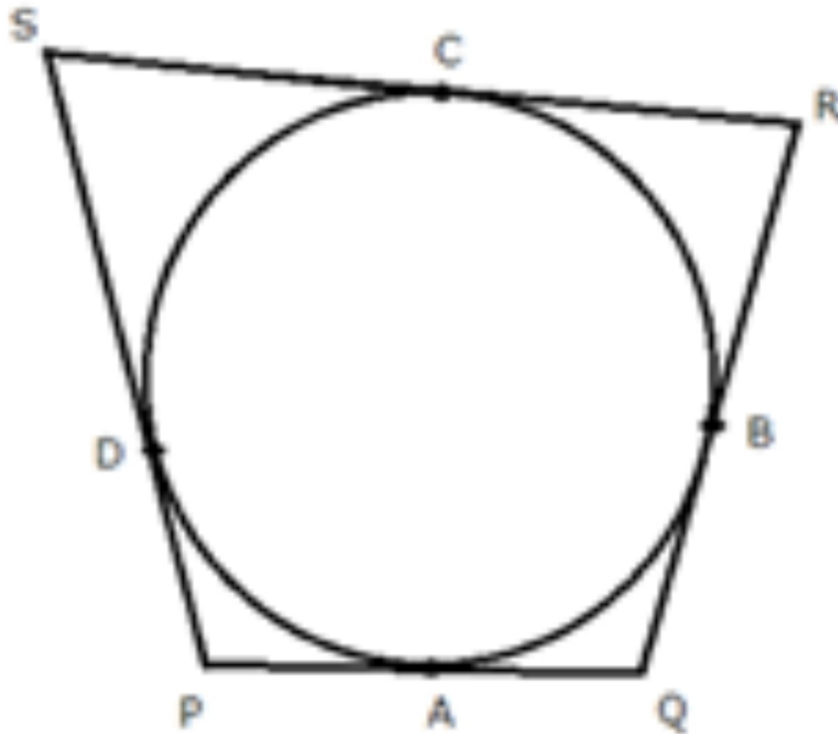


Figure 5:

- (a) QR
 (b) PS
 (c) PR
 (d) PQ
5. In the given figure, O is the center of the circle. AB and AC are tangents drawn to the circle from point A . If $\angle BAC = 65^\circ$, Then find the measure of $\angle BOC$.

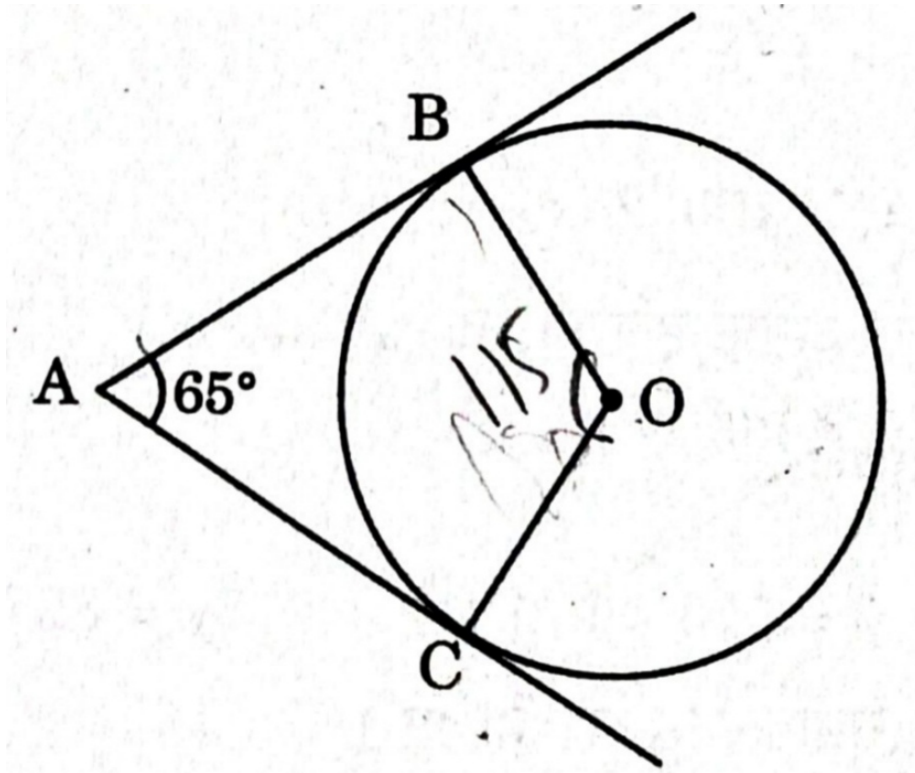


Figure 6:

6. In the given figure, O is the center of the circle and BCD is a tangent to it at p . Prove that $\angle BAC + \angle ACD = 90^\circ$

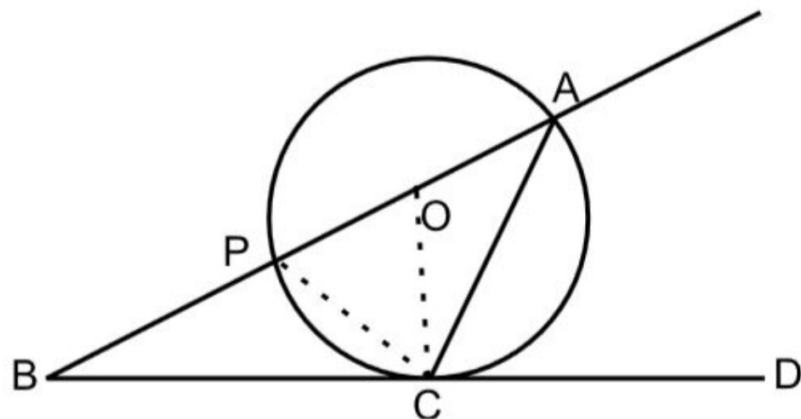


Figure 7:

7. In the given figure, PT is a tangent to the circle with center O . If $\angle TPO = 25^\circ$, Then x is equal to :

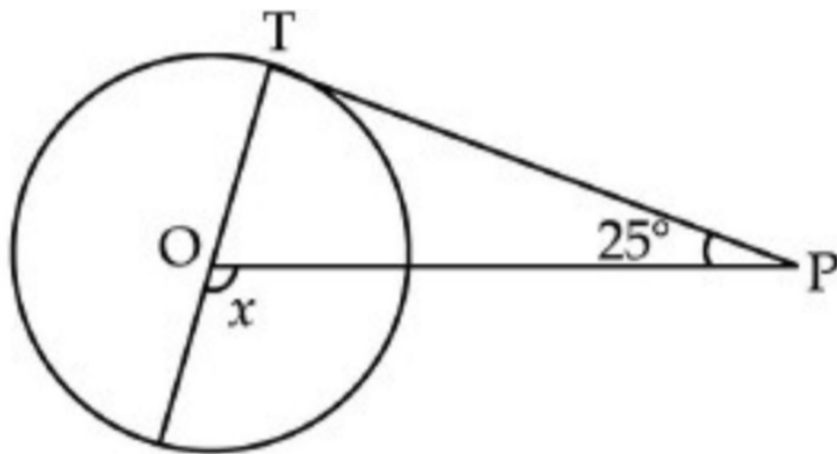


Figure 8:

- (a) 25°
 (b) 65°
 (c) 90°
 (d) 115°
8. In the given, TA is a tangent to the circle with center O such that $OT = 4\text{cm}$, $\angle OTA = 30^\circ$, Then length of TA is :

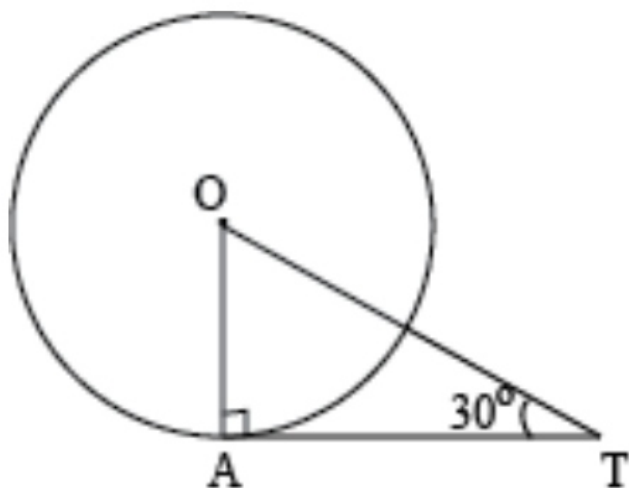


Figure 9:

- (a) $2\sqrt{3}$ cm
 - (b) 2 cm
 - (c) $2\sqrt{2}$ cm
 - (d) $\sqrt{3}$ cm
9. Two concentric circles are of radii 5 cm and 3 cm. Find the length of the chord of the larger circle which touches the smaller circle.