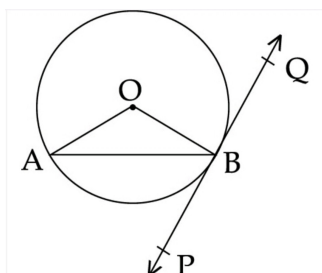
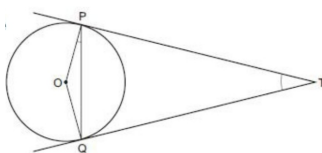


1. In the given figure, PQ is tangent to the circle centred at O. If $\angle AOB = 95^\circ$, then the measure of $\angle ABQ$ will be

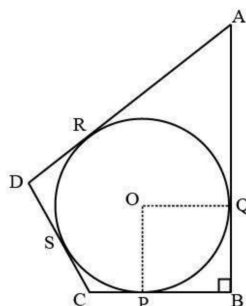


- (a) 47.5°
 (b) 42.5°
 (c) 85°
 (d) 95°
2. (a) Two tangents TP and TQ are drawn to a circle with center O from an external point T. prove that $\angle PTQ = 2\angle OPQ$

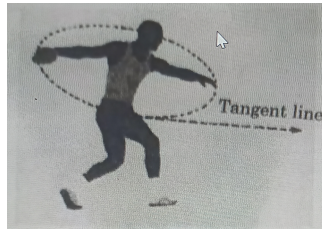


OR

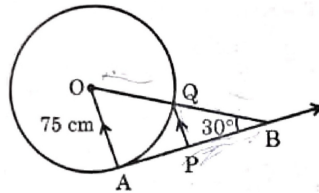
- (b) In the given figure, a circle is inscribed in a quadrilateral ABCD in which $\angle B = 90^\circ$. If $AD = 7$ cm, $AB = 20$ cm and $DS = 3$ cm, then find the radius of the circle



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 releases the throw. When released, the discus travels along a 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 $\angle ABO = 30^\circ$. PQ is parallel to OA



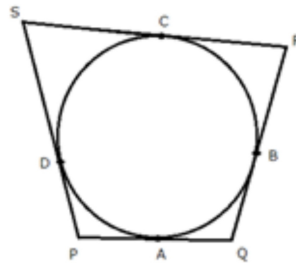
Based on above information:

- find the length of AB .
- find the length of OB .
- find the length of PQ .

OR

find the length of PQ .

4. In the given figure, the quadrilateral $PQRS$ circumscribes a circle. Here $PA + CS$ is equal to:

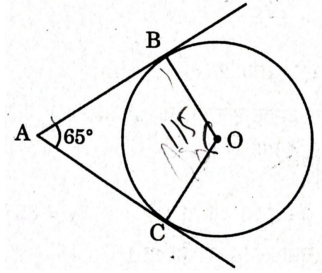


- QR
- PS

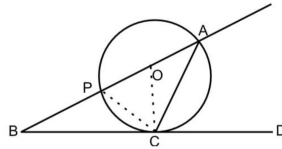
(c) PR

(d) PQ

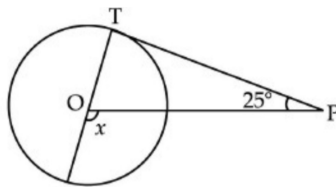
5. In the given figure, O is the center of the circle. AB and AC are tangents drawn to the circle from point A. If $\angle BAC = 65^\circ$, then find the measure of $\angle BOC$.



6. In the given figure, O is the center of the circle and QPR is a tangent to it at P. Prove that $\angle QAP + \angle APR = 90^\circ$



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



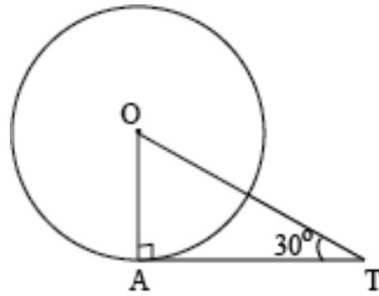
(a) 25°

(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:



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