

CIRCLES

Dec 2023

1. In Figure-1, from an external point P , two tangent PQ and PR are drawn to a circle of radius 4cm with center O . If $\angle PQR = 90^\circ$, then length of PQ is
- (a) 3cm
(b) 4cm
(c) 2cm
(d) $2\sqrt{2}\text{cm}$

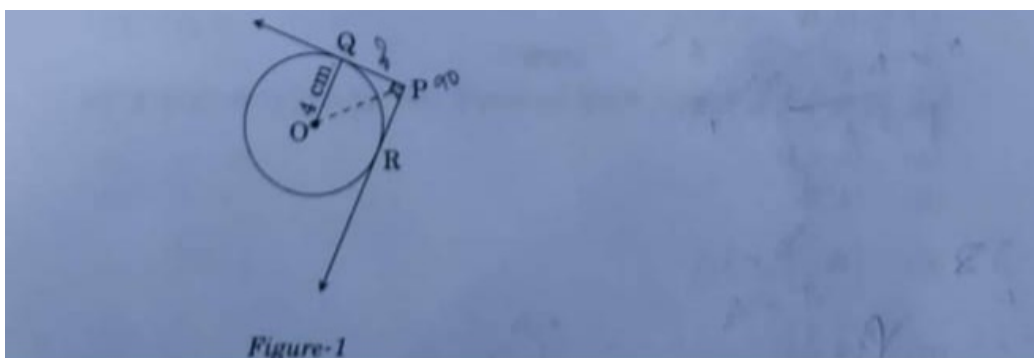


Figure 1

2. In Figure-2, PQ is tangent to the circle with center at O , at the point B . If $\angle AOB = 100^\circ$, then $\angle ABP$ is equal to

- (a) 50°
- (b) 40°
- (c) 60°
- (d) 80°

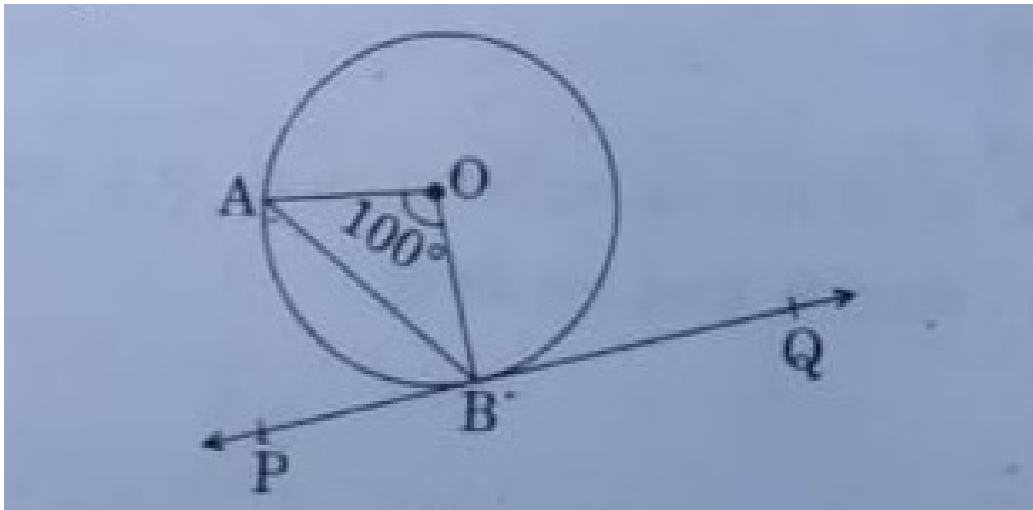


Figure 2

3. In Figure-3, quadrilateral $ABCD$ is drawn to circumscribe a circle. prove that

$$AB + CD = BC + AD$$

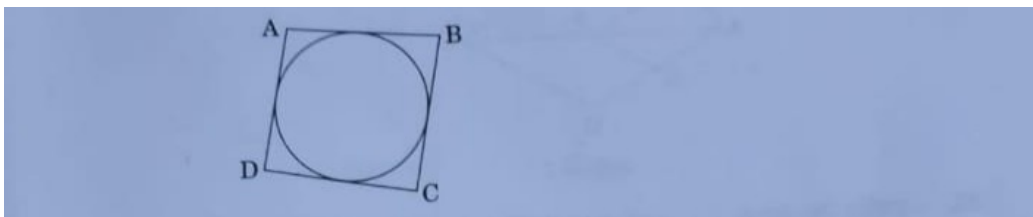


Figure 3

4. In Figure-4, find the perimeter of $\triangle ABC$, if $AP = 12\text{ cm}$

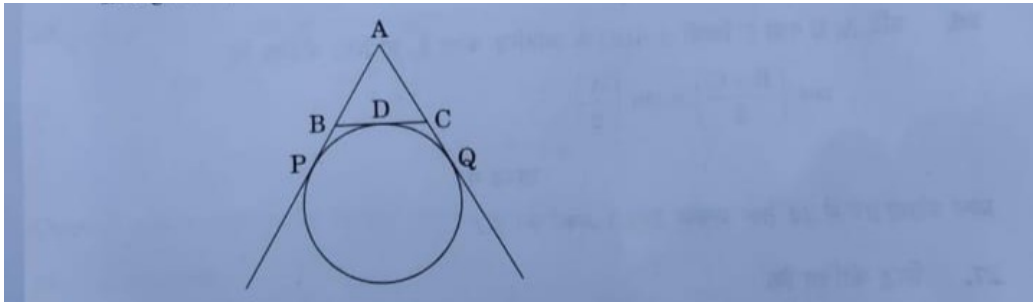


Figure 4