CHAPTER-10
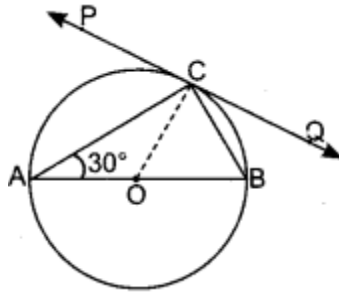## ASIGNMENT OF CIRCLES

Question 1.

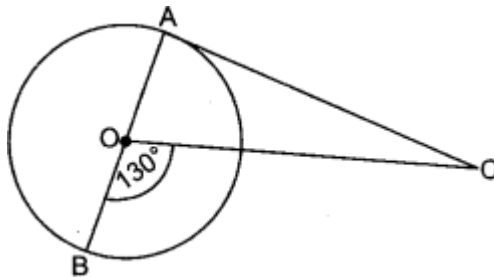From an external point P, tangents PA and PB are drawn to a circle with centre O. If ∠PAB = 50°, then find ∠AOB.

Question 2.

In given figure, PQ is a tangent at a point C to a circle with centre O. If AB is a diameter and ∠CAB = 30°, find ∠PCA

Question 3.

In figure given, AOB is a diameter of a circle with centre O and AC is a tangent to the circle at A. If ∠BOC = 130°, then find ∠ACO.
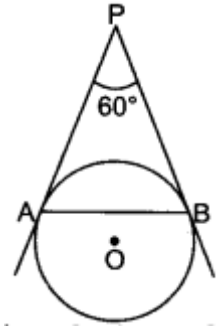

Question 4.

In given figure, a circle is inscribed in a ΔABC, such that it touches the sides AB, BC and CA at points D, E and F respectively. If the lengths of sides AB, BC and CA are 12 cm, 8 cm and 10 cm respectively, find the lengths of AD, BE and CF
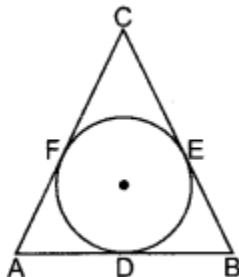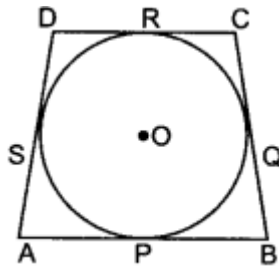
Question 5.

If given figure, AP and BP are tangents to a circle with centre O, such that AP = 5 cm and ∠APB = 60°. Find the length of chord AB.
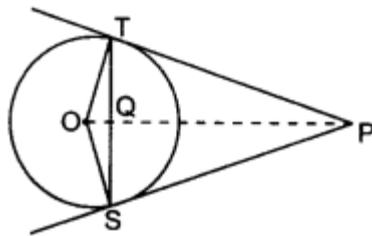

Question 6.

In figure, a quadrilateral ABCD is drawn to circumscribe a circle, with centre O, in such a way that the sides AB, BC, CD and DA touch the circle at the points P, Q, R and S respectively. Prove that AB + CD = BC + DA.
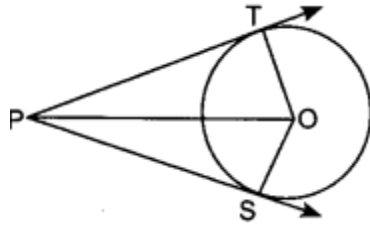

Question 7.

In given figure, from an external point P, two tangents PT and PS are drawn to a circle with centre O and radius r.If PO = 2r, show that ∠OTS =∠OST = 30°.
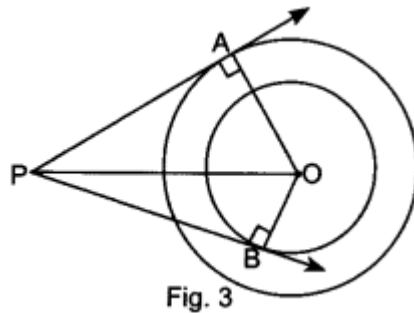

Question 8.

In given figure, from a point P, two tangents PT and PS are drawn to a circle with centre O such that ∠SPT = 120°, Prove that OP = 2PS

Question 9.

In given figure, there are two concentric circles of radii 6 cm and 4 cm with centre O. If AP is a tangent to the larger circle and BP to the smaller circle and length of AP is 8cm, find the length of BP


Fig. 3

Question 10.

Prove that the lengths of tangents drawn from an external point to a circle are equal

Question 11.

Prove that the tangent at any point of a circle is perpendicular to the radius through the point of contact.

Question 12.

In given figure, two equal circles, with centres O and O', touch each other at X. OO' produced meets the circle with centre O' at A. AC is tangent to the circle with centre O, at the point C. O'D is perpendicular to AC. Find the value of DO'/CO.
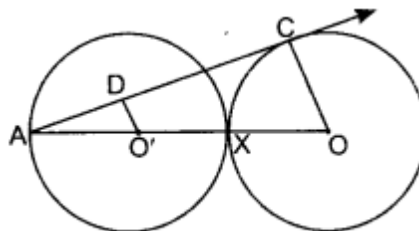
Question 13.

Two concentric circles of radii a and b(a > b) are given. Find the length of the chord of the larger circle which touches the smaller circle.

Question 14.

From a point T outside a circle of centre O, tangents TP and TQ are drawn to the circle. Prove that OT is the right bisector of the line segment PQ.