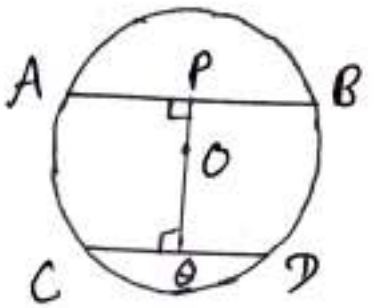
G. N. National Public School, Gorakhnath, GKP.

Class- IX Maths Chapter-10 Circles

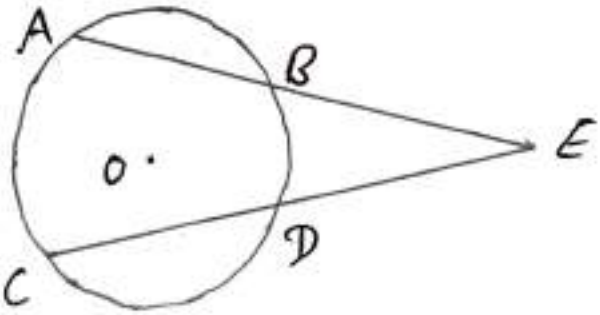
Assignment Part-1

Q.1- In the given figure, AB and CD are two parallel chords of a circle with centre O and radius 5 cm such that AB = 8 cm and CD = 6 cm. If OP ⊥ AB and OQ ⊥ CD, determine the length PQ.



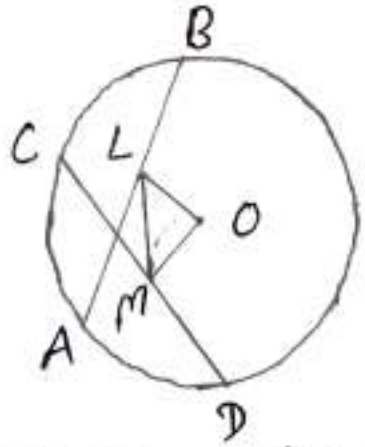
Q.2- In the given figure, two equal chords AB and CD of a circle C(O, r) when produced meet at a point E. Prove that

(i) BE = DE (ii) AE = CE.



Q.3- In the given figure, L and M are the midpoints of two equal chords AB and CD of a circle C(O, r). Prove that

(i) ∠OLM = ∠OML (ii) ∠ALM = ∠CML

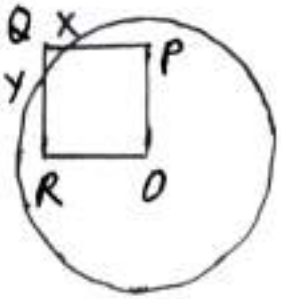


Q.4- AB and AC are two chords of a circle of radius r such that AB = 2AC. If p and q are the distances of AB and AC from the centre then prove that

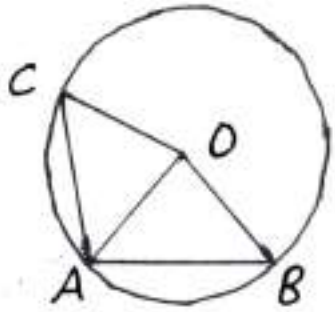
$$4q^2 = p^2 + 3r^2$$

CR-10 Circles Assignment Part-2

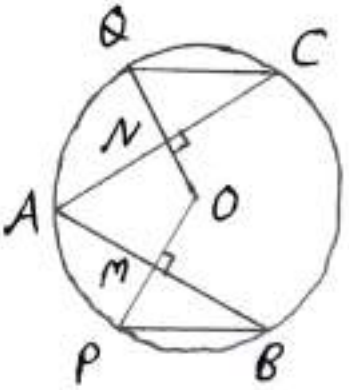
Q.5. In the adjoining figure, OPQR is a square. A circle drawn with centre O cuts the square in X and Y. Prove that QX = QY.



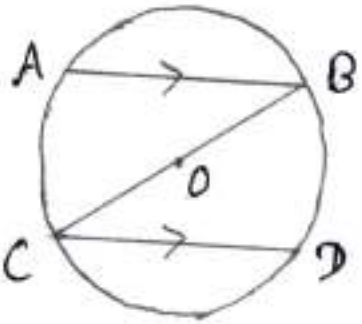
Q.6. In the adjoining figure, AB and AC are two equal chords of a circle with centre O. Show that O lies on the bisector of ∠BAC.



Q.7. In the adjoining figure, O is the centre of a circle. If AB and AC are chords of ~~the circle~~ the circle such that AB = AC, OP ⊥ AB and OQ ⊥ AC, prove that PB = QC.



Q.8. In the adjoining figure, BC is a diameter of a circle with centre O. If AB and CD are two chords such that AB ∥ CD, prove that AB = CD.



Q.9. Two circles with centre O and O' intersect at two points A and B. A line PQ is drawn parallel to OO' through A or B, intersecting the circles at P and Q. Prove that PQ = 2OO'.