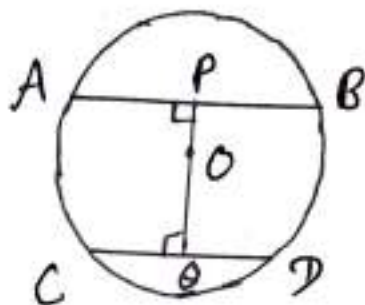
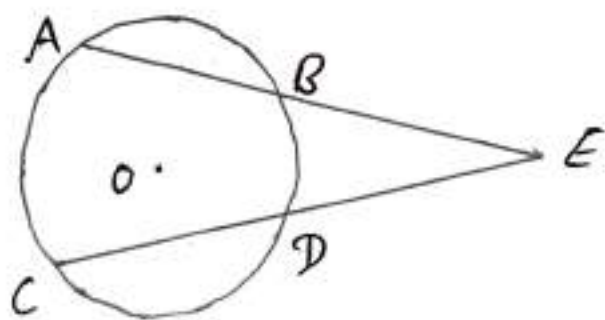


G. N. National Public School, Gorakhnath, G.K.P.
 Class- IX Maths Chapter-10 Circles
 Assignment Part-1

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 $OP \perp AB$ and $OQ \perp CD$, determine the length PQ.

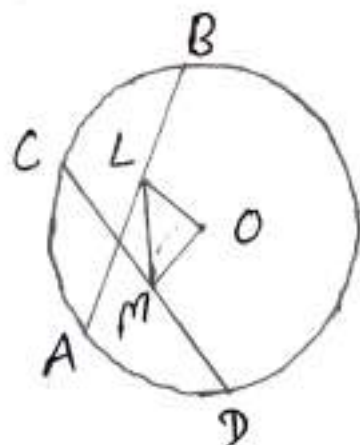


Q.2- In the given figure, two equal chords AB and CD of a circle $C(O, r)$ when produced meet at a point E. Prove that



(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



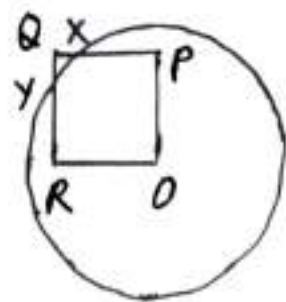
(i) $\angle OLM = \angle OML$ (ii) $\angle ALM = \angle CML$

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

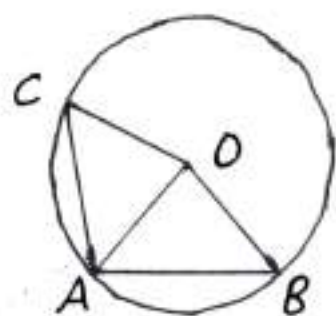
$$4q^2 = p^2 + 3r^2$$

Ch-10 Circles Assignment Part-2

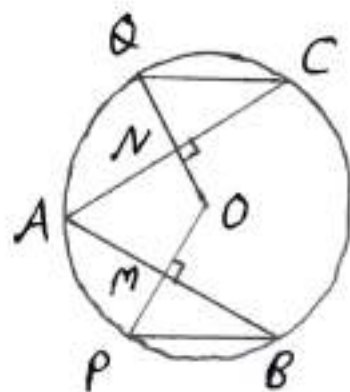
Q.5. In the adjoining figure, $OPQR$ is a square. A circle drawn with centre O cuts the square in X and Y .
Prove that $OX = OY$.



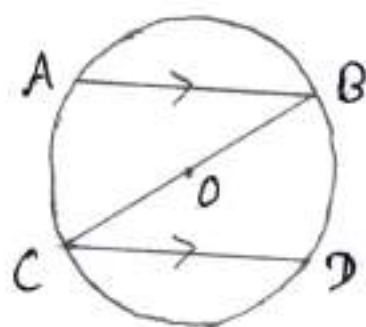
Q.6. In the adjoining figure, AB and AC are two equal chords of a circle with centre O . Show that O lies on the bisector of $\angle BAC$.



Q.7. In the adjoining figure, O is the centre of a circle. If AB and AC are chords of the circle such that $AB = AC$, $OP \perp AB$ and $OQ \perp AC$, 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 $AB \parallel CD$, prove that $AB = CD$.



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