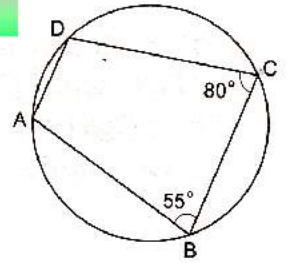
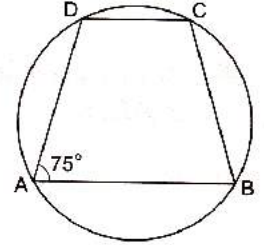


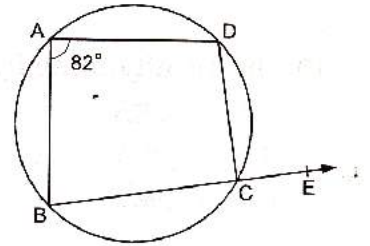
1. In the adjoining figure, $ABCD$ is a cyclic quadrilateral in which $\angle B = 55^\circ$ and $\angle C = 80^\circ$. Find $\angle A$ and $\angle D$.



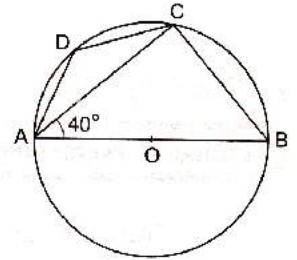
2. $ABCD$ is a trapezium with $AB \parallel DC$ inscribed in a circle. If $\angle A = 75^\circ$, find all the other angles of the trapezium.



3. Side BC of a cyclic quadrilateral $ABCD$ has been produced to E . If $\angle A = 82^\circ$, show that $\angle DCE = 82^\circ$.



4. In the given figure, AOB is a diameter of a circle with centre O , and $\angle BAC = 40^\circ$. $ABCD$ is a cyclic quadrilateral. Find $\angle ADC$.

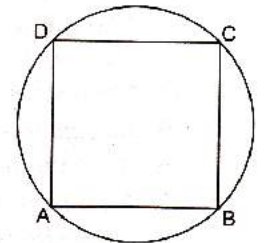


5. Prove that any cyclic parallelogram is a rectangle.

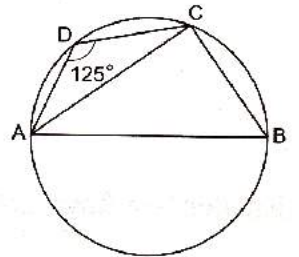
Hint. Let $ABCD$ be a cyclic parallelogram.

Then $\angle A = \angle C$ and $\angle A + \angle C = 180^\circ$.

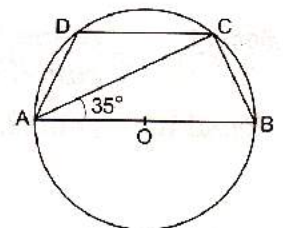
$\therefore \angle A = \angle C = 90^\circ$.



6. In the adjoining figure, $ABCD$ is a cyclic quadrilateral in which AB is a diameter. If $\angle ADC = 125^\circ$, find $\angle BAC$.



7. $ABCD$ is a cyclic quadrilateral in which $AB \parallel DC$ and AB is a diameter. If $\angle BAC = 35^\circ$, find $\angle ADC$ and $\angle DAC$.

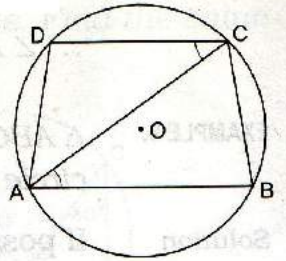


8. $ABCD$ is a trapezium inscribed in a circle with centre O . If $AB \parallel DC$ and AC is joined, show that

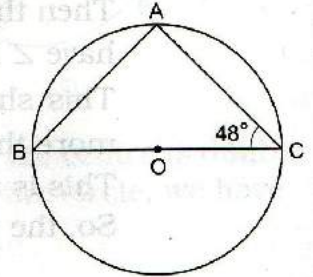
(i) $\angle ACD = \angle CAB$

(ii) $m(\widehat{AD}) = m(\widehat{BC})$

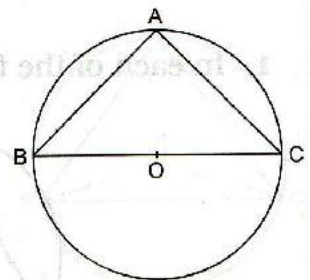
Hint. $m(\widehat{AD}) = \angle AOD = 2\angle ACD$ and $m(\widehat{BC}) = \angle BOC = 2\angle CAB$.



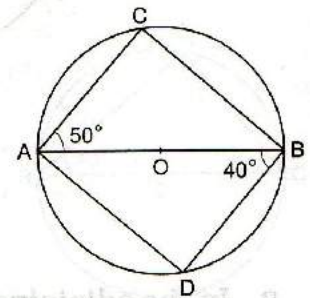
9. In the adjoining figure, $\triangle ABC$ is inscribed in a circle with centre O and BC is a diameter. If $\angle BCA = 48^\circ$, find $\angle ABC$.



10. In the given figure, O is the centre of a circle and chord $AC =$ chord AB . Find $\angle BAC$.



11. In the figure, AOB is a diameter of a circle with centre O . Points C and D are taken on the circle such that $\angle CAB = 50^\circ$ and $\angle ABD = 40^\circ$. Find $\angle CAD$ and $\angle CBD$.



12. AB is a diameter of a circle with centre O , $m(\widehat{AC}) = 30^\circ$ and $m(\widehat{CD}) = 70^\circ$; OC , OD , BC and BD are joined. Find

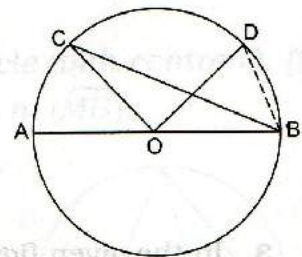
(i) $\angle COD$

(ii) $\angle CBD$

(iii) $\angle AOC$

(iv) $\angle ABC$

(v) $\angle BOD$



13. In the adjoining figure, two circles intersect at P and Q , AP and PB are the diameters. Show that AQB is a straight line.

Hint. Join PQ . Now $\angle AQP = 90^\circ$ and $\angle BQP = 90^\circ$.

