

I'M UP & DOWN, & ROUND & ROUND

Multiple Choice Questions

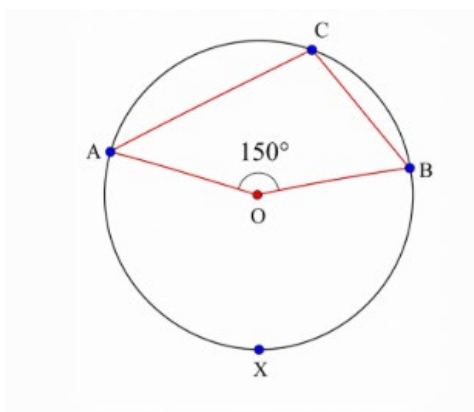
Q 1. In figure, O is the centre of the circle. If $\angle AOB = 150^\circ$, then $\angle ACB =$

(a) 75°

(b) 85°

(c) 105°

(d) 45°



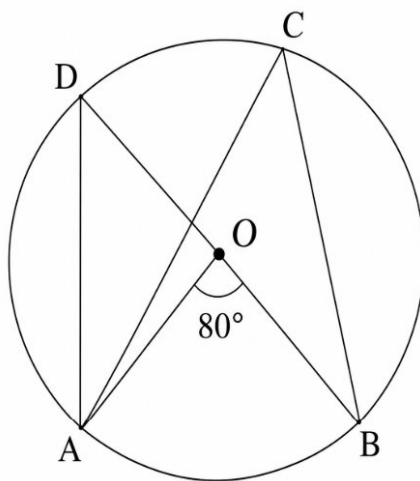
Q 2. In figure, O is the centre of the circle. If $\angle AOB = 80^\circ$, then $\angle ADB + \angle ACB =$

(a) 80°

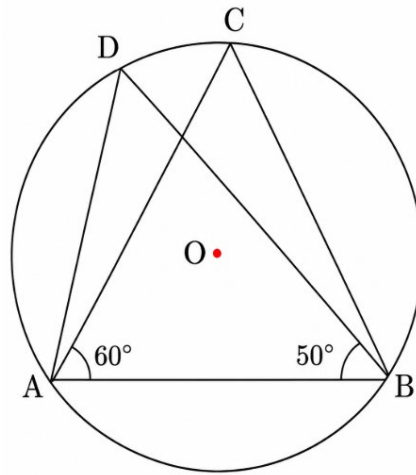
(b) 40°

(c) 60°

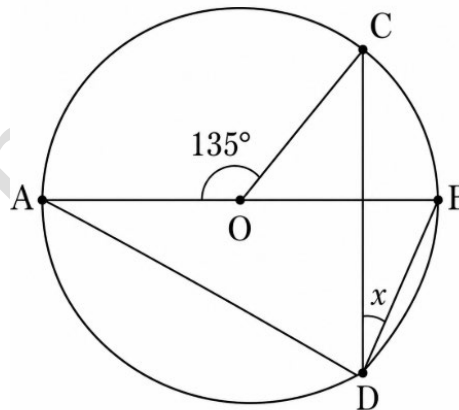
(d) 100°



- Q 3. In figure, if $\angle DAB = 60^\circ$ and $\angle ABD = 50^\circ$, then $\angle ACB =$
 (a) 60° (b) 50° (c) 70° (d) 80°

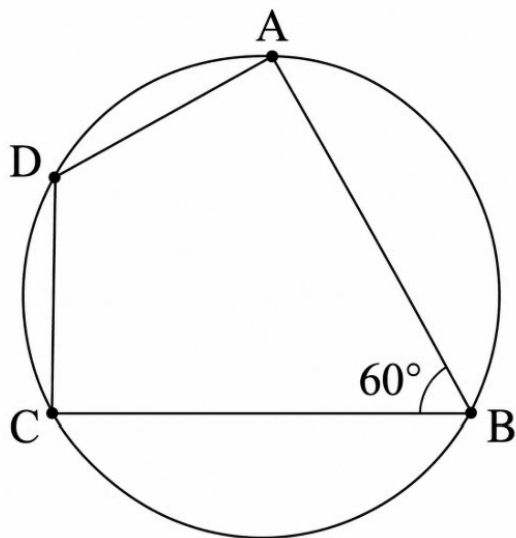


- Q4. If O is the centre of the circle, then value of x is:
 (a) 22.5° (b) 37.5° (c) 32.5° (d) 27.5°

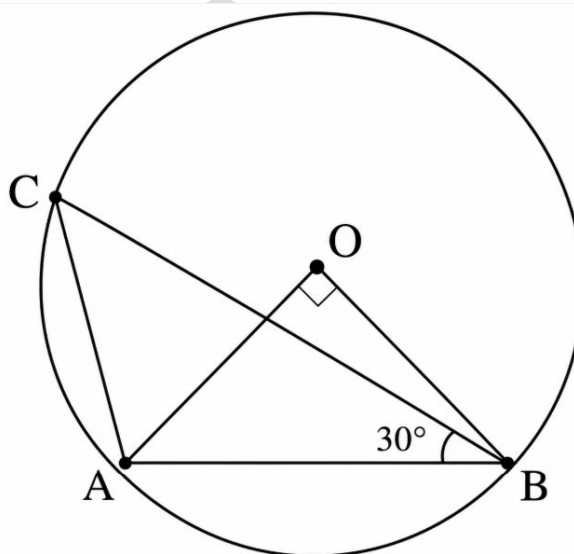


- Q 5. In the given figure, $\angle A : \angle C = 2 : 3$. What are the measures of $\angle C$ and $\angle D$?
 (a) $\angle C = 120^\circ$ and $\angle D = 108^\circ$
 (b) $\angle C = 108^\circ$ and $\angle D = 120^\circ$
 (c) $\angle C = 120^\circ$ and $\angle D = 72^\circ$
 (d) $\angle C = 72^\circ$ and $\angle D = 120^\circ$



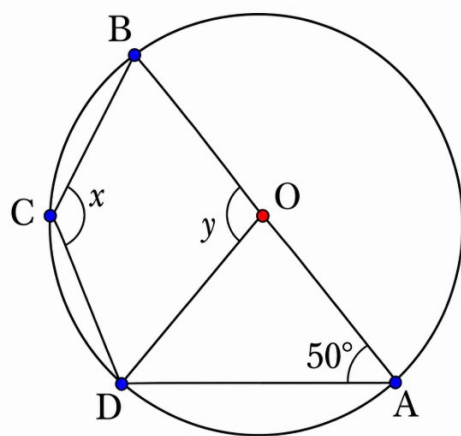


- Q 6. In figure, if $\angle AOB = 90^\circ$ and $\angle ABC = 30^\circ$, then $\angle CAO$ is equal to:
- (a) 30° (b) 45° (c) 90° (d) 60°



- Q 7. In the figure, O is the centre of the circle. If $\angle OAD = 50^\circ$, then
- (a) $x = 130^\circ, y = 100^\circ$ (b) $x = 100^\circ, y = 130^\circ$
(c) $x = 130^\circ, y = 80^\circ$ (d) $x = 100^\circ, y = 100^\circ$





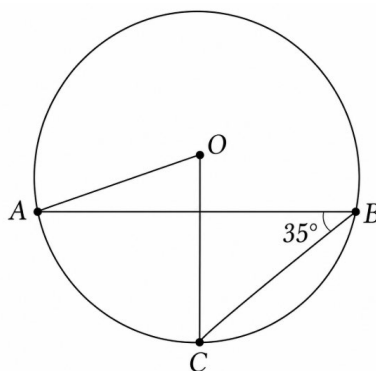
The following questions are Assertion and Reason based questions. Two statements are given, one labelled as Assertion (A) and the other is labelled as Reason (R). Select the correct answer to these questions from the codes (a), (b), (c) and (d) as given below.

- (a) Both A and R are true, and R is the correct explanation of A .
- (b) Both A and R are true, but R is not the correct explanation of A .
- (c) A is true, but R is false.
- (d) A is false, but R is true.

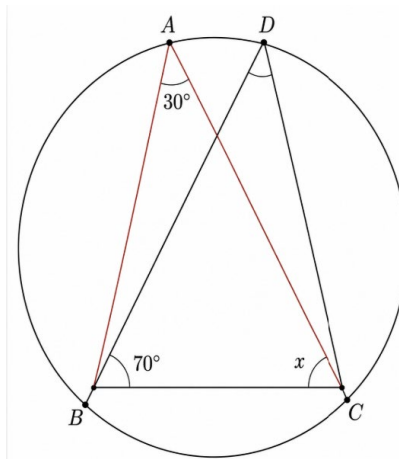
- Q 8. Assertion (A) : The angles subtended by a chord at any two points on the circle are equal.
Reason (R) : Angles subtended by a chord at two or more points in the same segment of a circle are equal.
- Q9. Assertion (A) : If AOB is a diameter of a circle and C is a point on the circle, then $AC^2 + BC^2 = AB^2$.
Reason (R) : Angle in a semi-circle is a right angle.
- Q 10. Assertion (A) : In a cyclic quadrilateral $ABCD$, if $\angle A = 60^\circ$, then $\angle C = 120^\circ$.
Reason (R) : Exterior angle of a cyclic quadrilateral is equal to its opposite interior angle

Short Answer Questions

- Q 11. In the figure, O is the centre of a circle and $\angle ABC = 35^\circ$, then find $\angle AOC$.

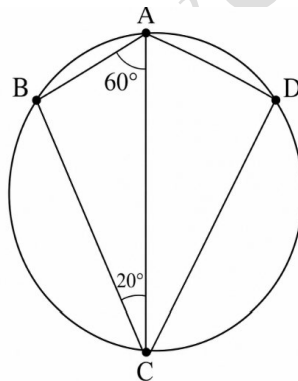


Q 12. In the figure, $\angle BAC = 30^\circ$ and $\angle DBC = 70^\circ$, then find the value of x .

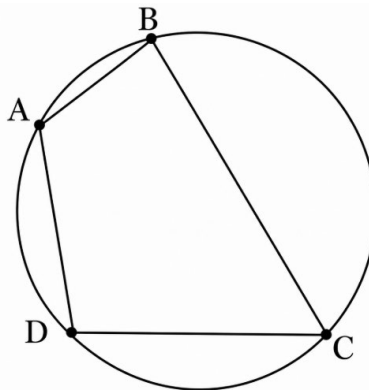


Q 13. $ABCD$ is a cyclic quadrilateral. If $\angle A = 90^\circ$, $\angle B = x$, $\angle C = y$, $\angle D = 110^\circ$, evaluate $2x - y$.

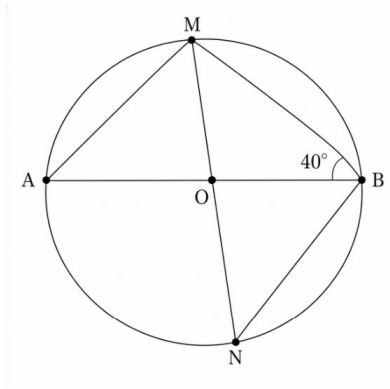
Q 14. In the figure, if $\angle BAC = 60^\circ$ and $\angle BCA = 20^\circ$, find $\angle ADC$.



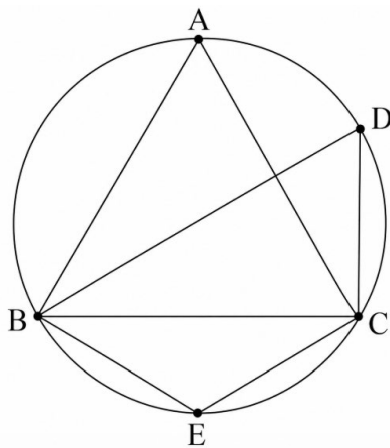
Q 15. In a cyclic quadrilateral $ABCD$, $\angle A = 3\angle C$. Find $\angle A$.



Q 16. In the figure, O is the centre of a circle. Find $\angle MNB$.

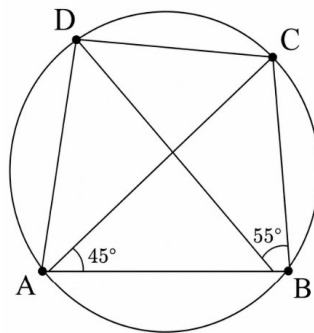


Q 17. In the figure, if ABC is an equilateral triangle. Find $\angle BDC$ and $\angle BEC$.



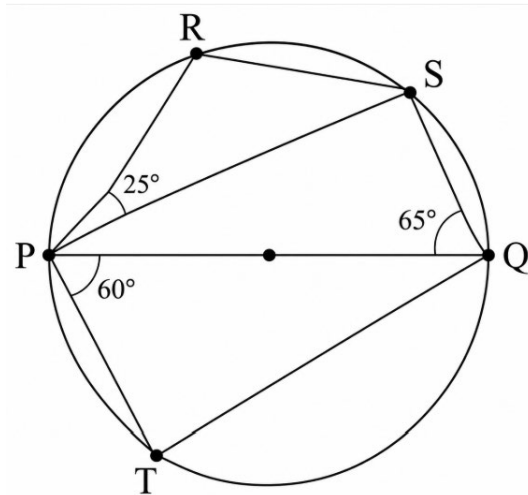
LONG ANSWER QUESTION

Q 18. In the figure, $ABCD$ is a cyclic quadrilateral in which AC and BD are its diagonals. If $\angle DBC = 55^\circ$ and $\angle BAC = 45^\circ$, find $\angle BCD$.



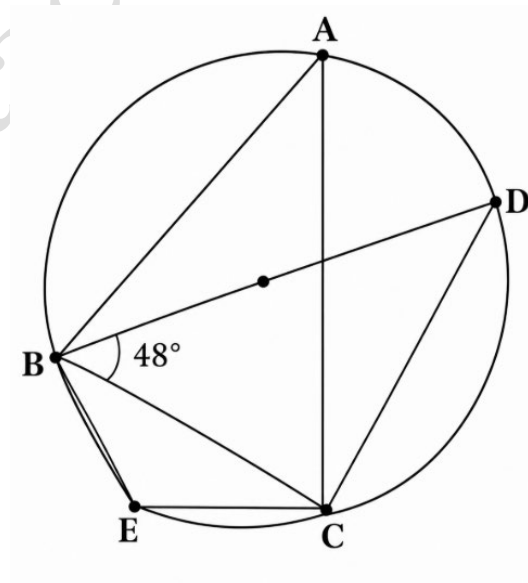
Q 19. In the adjoining figure, PQ is a diameter of a circle. If $\angle QPT = 60^\circ$, $\angle PQS = 65^\circ$ and $\angle SPR = 25^\circ$, find the measures of:

- (i) $\angle PQT$
- (ii) $\angle QPS$
- (iii) $\angle QSR$
- (iv) $\angle PSR$



Q20. In the adjoining figure, BD is a diameter of the circle. If $\angle DBC = 48^\circ$, then find:

- (i) $\angle BDC$
- (ii) $\angle BEC$
- (iii) $\angle BAC$



- Q 21. Four friends Rima, Sita, Mohan and Sohan are sitting on the circumference of a circular park. Their locations are marked by points A, P, Q and R . Rohit joins them and sits at the centre of the circular park, so he is equidistant from all the other friends. His position is marked as O . They are sitting in such a way that $\angle PQR = 110^\circ$. Based on above information, answer the following questions:
- What is the measure of reflex $\angle POR$? Give reason.
 - What is the measure of $\angle PAR$? Give reason.
 - Find $\angle OPR$. Give reason.

ANSWER KEY

- | | | | | | | |
|--|------------------|-------------------|-----------------|-----|-----|-----|
| 1.c | 2.a | 3.c | 4.a | 5.b | 6.d | 7.a |
| 8.d | 9.a | 10.b | | | | |
| 11. 70° | | | | | | |
| 12. 80° | | | | | | |
| 13. 50° | | | | | | |
| 14. 80° | | | | | | |
| 15. 135° | | | | | | |
| 16. 50° | | | | | | |
| 17. $\angle BDC = 60^\circ$ and $\angle BEC = 120^\circ$ | | | | | | |
| 18. 80° | | | | | | |
| 19. (i) 30° | (ii) 25° | (iii) 130° | (iv) 40° | | | |
| 20. (i) 42° | (ii) 138° | (iii) 42° | | | | |
| 21. (i) 220° | (ii) 70° | (iii) 20° | | | | |



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