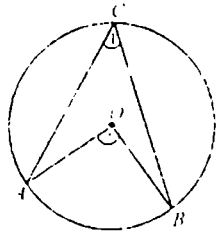
SOLVED MISCELLANEOUS EXERCISE 12

Q1. Multiple Choice Questions:
Four possible answers are given for the following question. Tick (✓) the correct answer.

(i) A circle passes through the vertices of a right angled ΔABC with mAC = 3cm and mBC = 4 cm, m∠C = 90°. Radius of the circle is:
(a) 1.5cm (b) 2.0cm (c) 2.5cm (d) 3.5cm

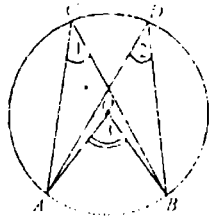
(ii) In the adjacent circular figure, central and inscribed angles stand on the same arc $\overline{AB}$ then



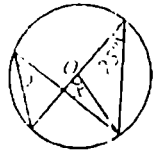
(a) m∠1 = m∠2 (b) m∠1 = 2m∠2
(c) m∠2 = 3m∠2 (d) m∠2 = 2m∠1

(iii) In the adjacent figure if m∠3 = 75°, then find m∠1 and m∠2.

(a) $37\frac{1^{\circ}}{2}, 37\frac{1^{\circ}}{2}$ (b) $37\frac{1^{\circ}}{2}, 75^{\circ}$ (c) $75^{\circ}, 37\frac{1^{\circ}}{2}$ (d) $75^{\circ}, 75^{\circ}$



(iv) Given that O is the centre of the circle. The angle marked x will be:



(a) $12\frac{1^{\circ}}{2}$ (b) 25° (c) 50° (d) 75°

(v) Given that 0 is the centre of the circle the angle marked y will be:

(a) $12\frac{1^{o}}{2}$ (b) 25° (c) 50° (d) 75°

(vi) In the figure, O is the centre of the circle and $\overleftrightarrow{ABN}$ is a straight line. The obtuse angle AOC = x is:

(a) 32° (b) 64° (c) 96° (d) 128°

(vii) In the Figure, O is the centre of the circle, then the angle x is:

(a) 55° (b) 110° (c) 220° (d) 128°

(viii) In the figure, O is the centre of the circle then angle x is:

(a) 15° (b) 30° (c) 45° (d) 60°

(a) 15° (&) 30° (c) 45° (d) 60°

(x) In the figure, 0 is the centre of the circle then the angle x is:

(a) 50° (b) 75° (c) 100° (d) 125°

Answers:

(i)	c	(ii)	d	(iii)	a	(iv)	c	(v)	b
(vi)	d	(vii)	d	(viii)	b	(ix)	d	(x)	c

SUMMARY

- ✔ The angle subtended by an arc at the centre of a circle is called is central angle.
- ✔ A central angle is subtended by two radii with the vertex at the centre of the circle.
- ✔ The angle 'subtended by an arc at the circumference of a circle is called acircum angle.
- ✔ A circumangle is subtended between any two chords of a circle. having common point on its circumference.
- ✔ If a circle passes through three or more points than these points are called; concyclic.
- ✔ A quadrilateral is called cyclic when a circle can be drawn through it: four vertices.
- ✔ In a cyclic quadrilateral. the opposite angles are supplementary.
- ✔ The measure of a central angle of a minor arc of a circle, is double that of the angle subtended by the corresponding major arc.
- ✔ Any two angles in the same segment of a circle are equal.
- ✔ The angle
  - in a semi-circle is a right angle,
  - in a segment greater than a semi-circle is less than a right angle.
  - in a segment less than a semi-circle is greater than a right angle.
- ✔ The opposite angles of any quadrilateral inscribed in a circle are supplementary.

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