SpeedLabs
MATHS

CBSE 9th

TEEVRA EDUTECH PVT. LTD.

CIRCLE
Exercise- 10.1

SpeedLabs
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Q.1 Fill in the blanks

(i) The Centre of a circle lies in _____ of the circle. (exterior/ interior)

(ii) A point, whose distance from the Centre of a circle is greater than its radius lies in _____ of the circle. (exterior/ interior)

(iii) The longest chord of a circle is a _____ of the circle.

(iv) An arc is a _____ when its ends are the ends of a diameter.

(v) Segment of a circle is the region between an arc and _____ of the circle.

(vi) A circle divides the plane, on which it lies, in _____ parts.

Ans. **(i)** The Centre of a circle lies in interior of the circle.

(ii) A point, whose distance from the Centre of a circle is greater than its radius lies in exterior of the circle.

(iii) The longest chord of a circle is a diameter of the circle.

(iv) An arc is a semi-circle when its ends are the ends of a diameter.

(v) Segment of a circle is the region between an arc and chord of the circle.

**(vi)** A circle divides the plane, on which it lies, in three parts.

Q.2 Write True or False: Give reasons for your answers.

(i) Line segment joining the Centre to any point on the circle is a radius of the circle.

(ii) A circle has only finite number of equal chords.

(iii) If a circle is divided into three equal arcs, each is a major arc.

(iv) A chord of a circle, which is twice as long as its radius, is a diameter of the circle.

(v) Sector is the region between the chord and its corresponding arc.

(vi) A circle is a plane figure.

Ans. **(i)** True. All the points on the circle are at equal distances from the centre of the circle, and this equal distance is called as radius of the circle.

(ii) False. There are infinite points on a circle. Therefore, we can draw infinite number of chords of given length. Hence, a circle has infinite number of equal chords.

(iii) False. Consider three arcs of same length as AB, BC, and CA. It can be observed that for minor arc BDC, CAB is a major arc. Therefore, AB, BC, and CA are minor arcs of the circle.
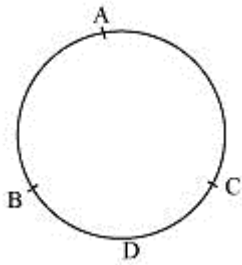
(iv) True. Let AB be a chord which is twice as long as its radius. It can be observed that in this situation, our chord will be passing through the Centre of the circle. Therefore, it will be the diameter of the circle.

Sector
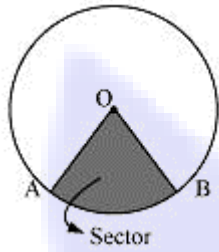
(vi) True. A circle is a two-dimensional figure and it can also be referred to as a plane figure.