EXERCISE 4.6 **PAGE NO: 84**

1. From the figure, identify:
(a) the centre of circle
(b) three radii
(c) a diameter
(d) a chord
(e) two points in the interior
(f) a point in the exterior
(g) a sector
(h) a segment
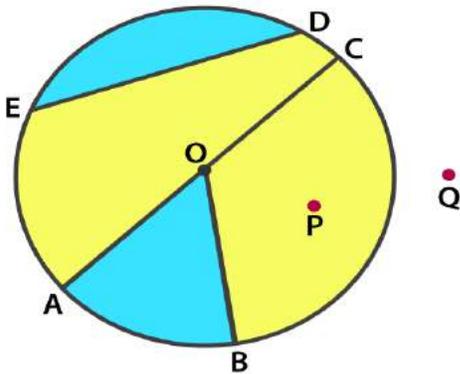
Solutions:
(a) The centre of circle is O
(b) Three radii are $\overline{OA}, \overline{OB}, \overline{OC}$
(c) A diameter is $\overline{AC}$
(d) A chord is $\overline{ED}$
(e) Two points in the interior are O and P
(f) A point in the exterior is Q
(g) A sector is AOB i.e shaded region
(h) A segment is ED i.e shaded region

2. (a) Is every diameter of a circle also a chord?
**(b) Is every chord of a circle also a diameter?**
Solutions:
(a) Yes every diameter of a circle is also a chord. Diameter is also called as longest chord.
(b) No, every chord is not a diameter.

3. Draw any circle and mark
(a) its centre
(b) a radius
(c) a diameter
(d) a sector
(e) a segment
(f) a point in its interior
(g) a point in its exterior

(h) an arc
Solutions:
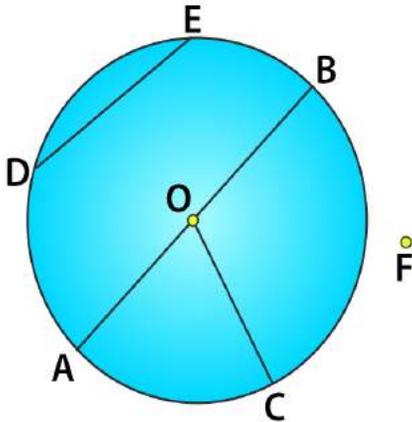
(a) The centre of the circle is O.
(b) The radius is OC
(c) A diameter is $\overline{AB}$
(d) A sector is AOC
(e) A segment is DE
(f) A point in its interior is O
(g) A point in its exterior is F
(h) An arc is $\overset{\frown}{AC}$

4. Say true or false:
(a) Two diameters of a circle will necessarily intersect.
(b) The centre of a circle is always in its interior.
Solutions:
(a) True, two diameters will always intersect each other at the centre of the circle.
(b) True, the centre of the circle will always be in its interior.