

Board –CBSE

Class – 6<sup>th</sup>

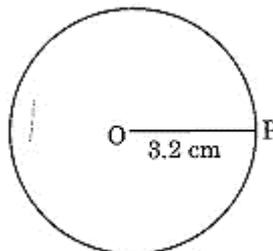
Topic – Practical Geometry Ex: 14.1

## Exercise 14.1

1. Draw a circle of radius 3.2 cm.

**Ans.** Step I: Mark a point O as the center.

Step II: Open the compass up to the given radius of 3.2 cm.

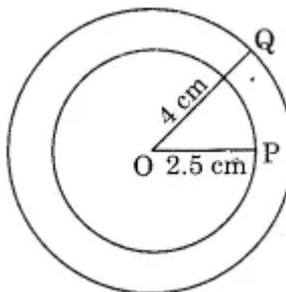


Step III: Put the needle of the compass at the center O.

Step IV: Holding the top of the compass take one full round with a pencil. The figure thus obtained is the required circle of radius 3.2 cm.

2. With the same center O, Draw two circles of radius 4 cm and 2.5 cm.

**Ans.** Step I: Take center O and open the compass up to 4 cm.



Step II: Draw a circle keeping the needle fixed at O.

Step III: Take the same center O and open the compass up to 2.5 cm, and draw another circle.

The figure shows the required two circles with the same center.

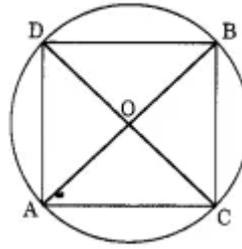
3. Draw a circle and any two of its diameters. If you join the ends of these diameters, what is the figure obtained? What figure is obtained if the diameters are perpendicular to each other? How do you check your answer?

**Ans.** (i) Draw a circle with center O with a suitable radius.

(ii) AB and CD are any two diameters.

(iii) On joining the endpoints of the diameters, we get a quadrilateral ACBD.

(iv) We note that  $OA = OB = OC = OD$  [Same radius]



- (i) Draw a circle with center O with a suitable radius.
- (ii) AB and CD are any two diameters.
- (iii) On joining the endpoints of the diameters, we get a quadrilateral ACBD.
- (iv) We note that  $OA = OB = OC = OD$  [Same radius]

and  $AC = DB, AD = BC$

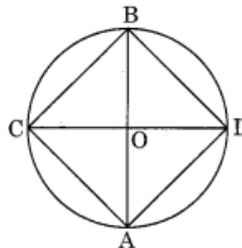
$$\angle A = \angle C = \angle B = \angle D = 90^\circ$$

Thus ACBD is a rectangle.

Again if the diameters are perpendicular to each other, then on measuring, we get

$$AC = DB = AD = BC$$

Thus, ACBD is a square.

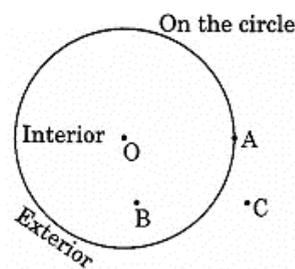


4. Draw any circle and mark points A, B, and C such that
- (a) A is on the circle
  - (b) B is in the interior of the circle
  - (c) C is in the exterior of the circle.

**Ans.** Draw a circle with a center O and a suitable radius.

Here

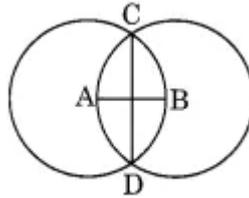
- (a) A is on the circle.
- (b) B is in the interior of the circle.
- (c) C is on the exterior of the circle.



5. Let A, B be the centers of the two circles of equal radii.  
Draw them so that each one of them passes through the center of the other.  
Let them intersect at C and D.

Examine whether  $\overline{AB}$  and  $\overline{CD}$  are at right angles.

- Ans.** In the given figure two circles of equal radii intersect each other at C and D on measuring,



we see that  $\overline{AB}$  and  $\overline{CD}$  intersect each other at right angles.