

(Write this in your classwork copy)

Circle and its Construction

- * A circle is a simple closed curve.
- * It is not a polygon as it is not made up of straight lines.



Wheel



Clock

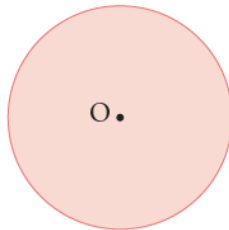


Bangle

All these objects are the examples of a circle.

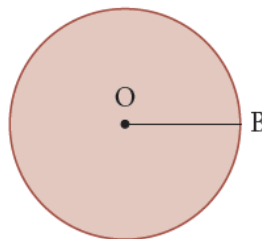
PARTS OF A CIRCLE

1) **Centre:-** The fixed point from which the circle is drawn is called the centre of the circle.



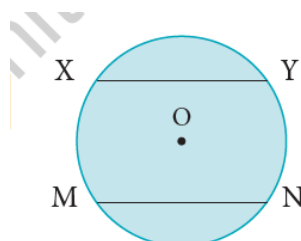
Here, Point O is the centre of the circle.

2) **Radius:-** The line segment joining the centre of the circle to any point on the circle is called the radius of the circle.



Here, line segment OB is the radius of the circle.

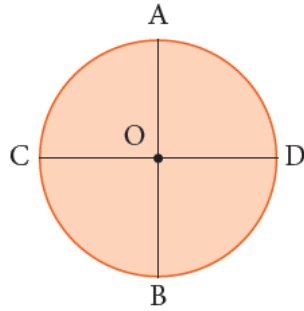
3) **Chord:-** The line segment joining any two points on a circle is called a chord.



Here, XY and MN are the chords of the circle.

4) **Diameter**:- A chord that passes through the centre is called a diameter of the circle.

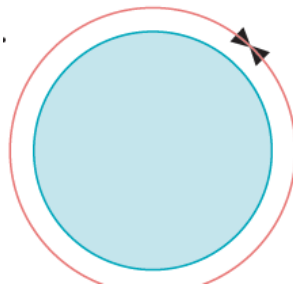
It is also known as the longest chord of the circle.



Here, AB and CD are the diameters of the circle.

Note:- A circle has many radii and diameters.

5) **Circumference**:- The length of the boundary of a circle is called its circumference.



Relation Between Radius and Diameter of a circle

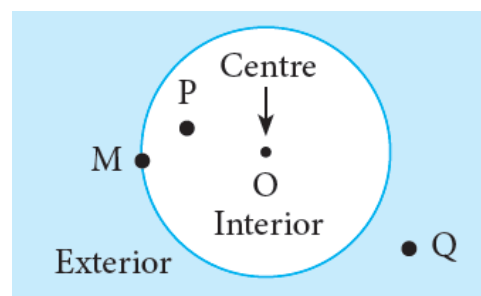
➤ Diameter = 2 x radius

➤ Radius = $\frac{1}{2}$ x diameter

Interior and Exterior of a circle

* The points that lie inside the circle are called interior of the circle.

* The points that lie outside the circle are called exterior of the circle.



Here, Point O and P are in the interior of the circle. Point M is on the circle.

Point Q lies to the exterior of the circle.