



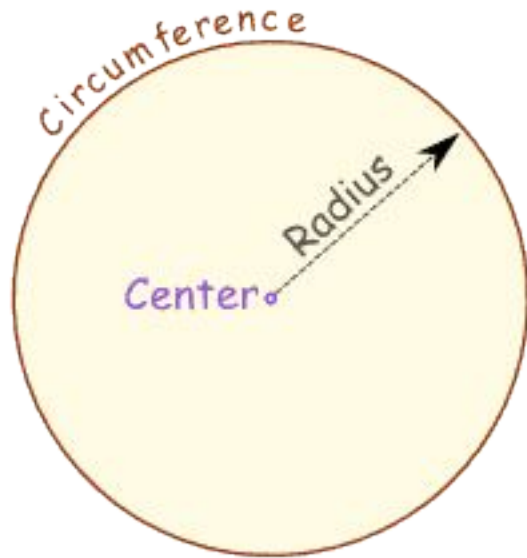
Circles



Radius

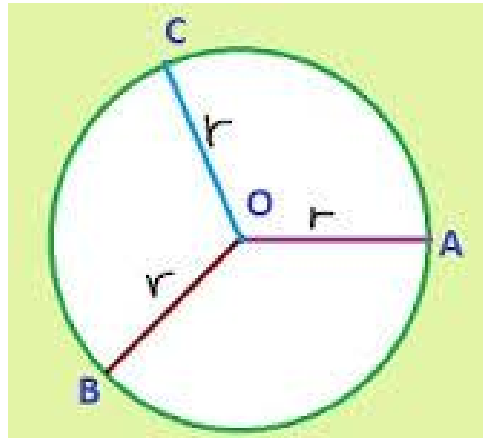
What is a radius?

It is the distance from the center of the circle to the circumference of the circle.



Radius

The radius (r) is any segment joining the center of the circle to any point on the circle.

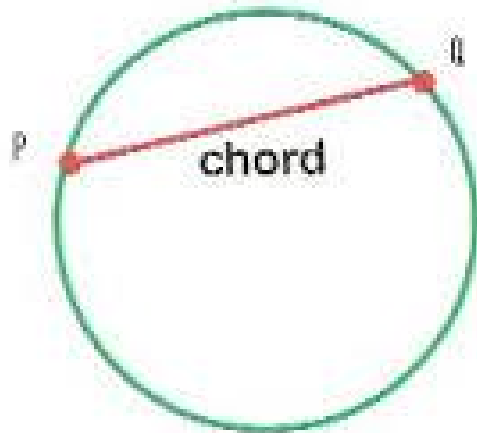


Are they always the same length?

So line segments OA, OB and OC are all radii.

Chord

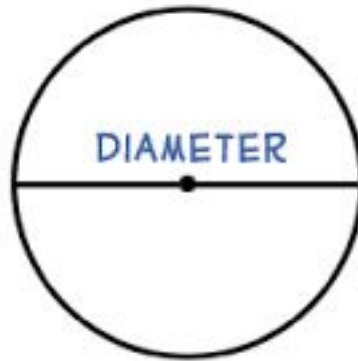
A chord is a line segment that connects two points on the circumference.



Line segment PL is a chord.

Diameter

The diameter is a straight line segment, that goes through the centre of the circle and connects two points on the circumference.



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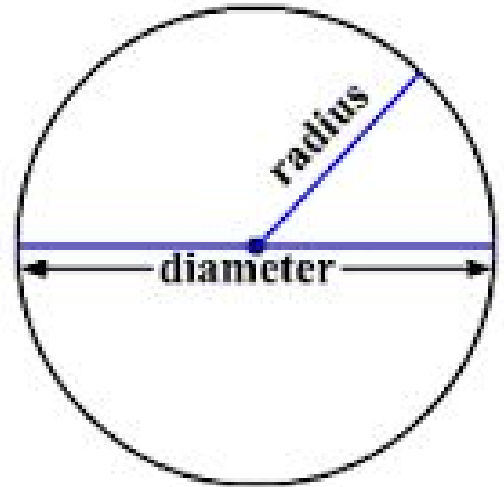
All diameters are chords, but are all chords diameters?

Diameter and Radius

The diameter is always twice as long as the radius

or

The radius is always half the length of the diameter



Diameter and Radius

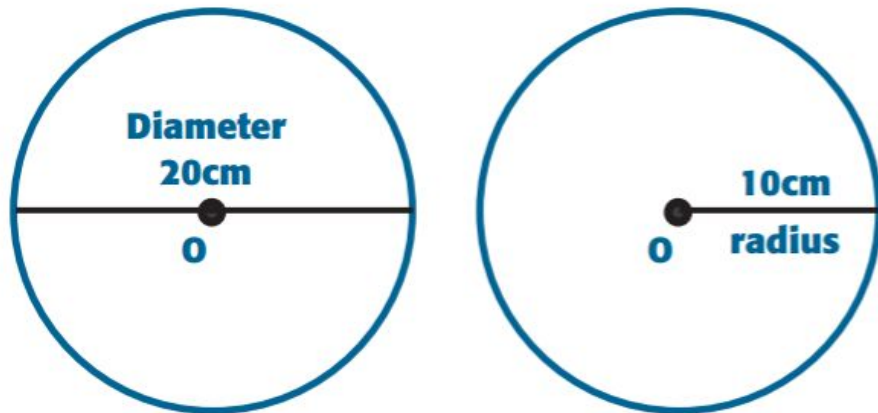
As a formula, we can write:

$$d = (2)(r)$$

where d = diameter r = radius

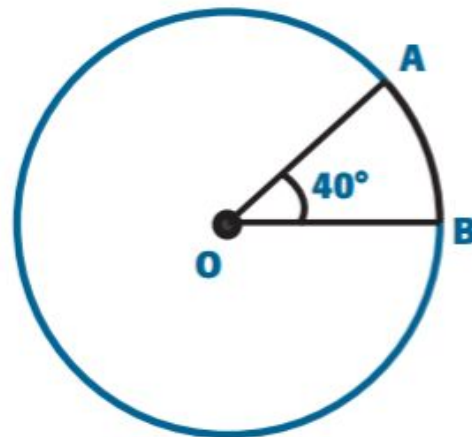
or

$$r = d/2$$



Central Angles of a Circle

The central angle in a circle is an angle that is measured using the center (O) of the circle as the vertex of the angle.



$$m\angle AOB = 40^\circ$$

This is a central angle.