

Circles and Circumference

Circles are a very important part of our world. Look around the room to find a circular shape. We will name the parts of a circle and find its circumference. We will explore a term called “pi” that is connected to circles.

Circumference is the distance around a circle. Imagine being an ant and crawling around the edge of a circle. When the ant reaches the point on the circle where he started, he has traveled the circumference of the circle.

Parts of a Circle

Circumference of a Circle

Parts of a Circle

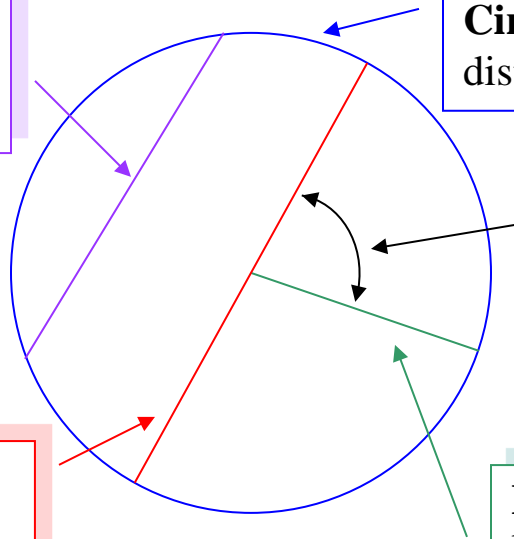
Chord is a line segment with both endpoints on the circle.

Circumference is the distance around a circle.

A **central angle** is an angle formed between two radii. The vertex of the angle is the center of the circle.

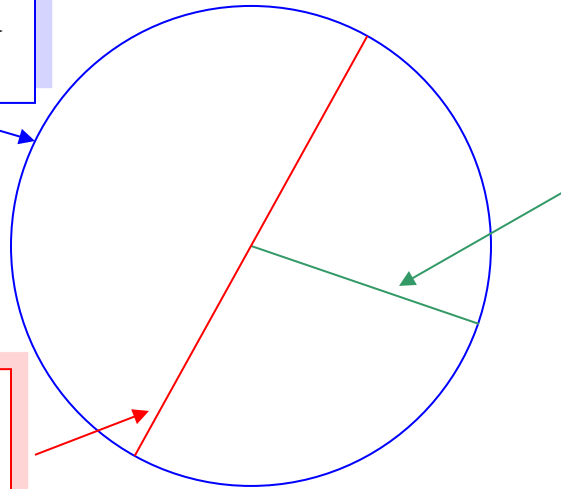
Diameter is the length of a line segment that goes across a circle passing through the center point. The diameter is twice the radius.

Radius is the length of a line segment going from the center to the edge of a circle. (plural, radii)



Circumference of a Circle

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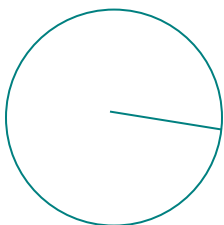
Pi (π) is the ratio of the circumference of a circle to its diameter ($\frac{C}{d}$).

π is approximately equal to 3.14.

$$C = \pi \times d \quad \longrightarrow \quad C = \pi \times d \quad \text{or} \quad C = 2 \times \pi \times r$$

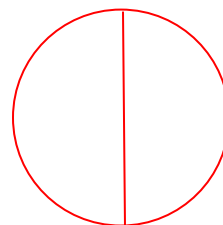
Find the circumference for each of the circles.

Radius = 6 in



$$\begin{aligned} C &= 2 \times \pi \times r \\ C &= 2 \times 3.14 \times 6 \\ C &= 37.68 \text{ in} \end{aligned}$$

Diameter = 14 ft



$$\begin{aligned} C &= \pi \times d \\ C &= 3.14 \times 14 \\ C &= 43.96 \text{ ft} \end{aligned}$$