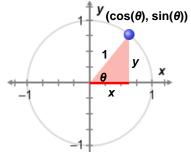
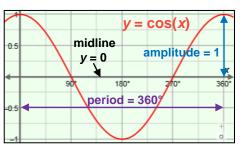
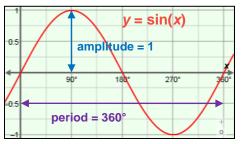
Vocabulary

Gizmos

- <u>Amplitude</u> the vertical distance between the midline and the maximum of the graph of a sine or cosine function.
- <u>Cosine</u> in a right triangle, the length of the leg adjacent to angle θ divided by the hypotenuse: $\cos(\theta) = \frac{\text{adjacent}}{\text{hypotenuse}}$.
 - If θ has its vertex at the center of a unit circle, $\cos(\theta)$ is the *x*-coordinate of the point where the angle intersects the circle.
- <u>Midline</u> the line halfway between the maximum and minimum points of the graph of a sine or cosine function.
- <u>Period</u> the length of the interval that repeats in a function.
 - A function whose values repeat in regular intervals is *periodic*.
- <u>Radian</u> a unit of angle measure, such that one full rotation equals 2π radians.
 - Because 1 rotation (360°) = 2π radians, it follows that π radians = 180°, and 1 radian = $\frac{180^{\circ}}{\pi}$, or about 57.3°.







- If a central angle of a circle measures 1 radian, it intercepts an arc that is the same length as the radius of the circle.
- <u>Sine</u> in a right triangle, the length of the leg opposite angle θ divided by the hypotenuse: $\sin(\theta) = \frac{\text{opposite}}{\text{hypotenuse}}$
 - If θ has its vertex at the center of a unit circle, $sin(\theta)$ is the *y*-coordinate of the point where the angle intersects the circle.

