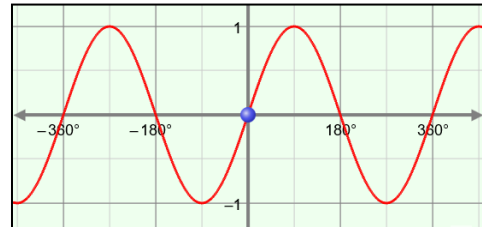


Vocabulary: Sine Function



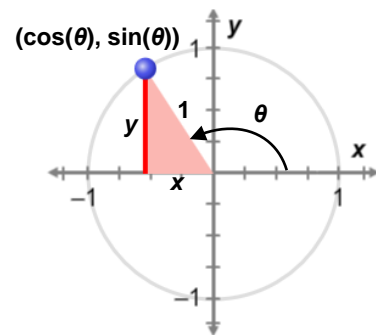
Vocabulary

- **Odd function** – a function whose graph is symmetric about the origin.
 - If the point (x, y) lies on the graph of an odd function, then $(-x, -y)$ also lies on the graph.
- **Period** – the length of the interval that repeats in a function.
 - A function whose values repeat in regular intervals is *periodic*.
 - For example, $y = \sin(\theta)$ is periodic, with a period of 360° , or 2π radians.

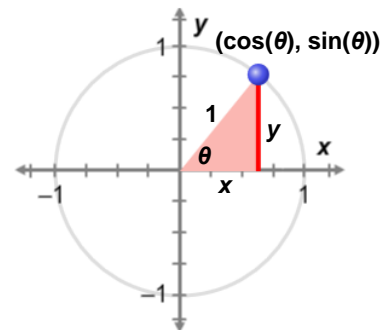


- **Radian** – a unit of angle measure, such that one full rotation equals 2π radians.
 - Because 1 rotation (360°) = 2π radians, it follows that π radians = 180° , and $1 \text{ radian} = \frac{180^\circ}{\pi}$, or about 57.3° .
 - If a central angle of a circle measures 1 radian, it intercepts an arc that is the same length as the radius of the circle.

- **Reference triangle** – a right triangle formed by a perpendicular segment drawn from the terminal ray of an angle θ in standard position to the x -axis.
 - For example, the triangle to the right is the reference triangle for angle θ .



- **Sine** – 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 is in *standard position*, with its vertex at the center of a unit circle, $\sin(\theta)$ is the y -coordinate of the point where the angle intersects the circle.



- **Trigonometric function** – a function of an angle given as the ratio of the sides of a right triangle that contains the angle.
- **Unit circle** – a circle with a radius of 1.