

**0.1 Definition 1**

An angle is a geometrical object generated by rotating a ray (half-line) about its endpoint.

**0.2 Definition 2**

An angle is in standard position if it has its vertex at the origin of a coordinate system and its initial side is along the positive  $x$ -axis.

**0.3 Definition 3**

One radian is the measure of an angle in standard position that has its vertex at the center of a circle and that cuts an arc on the circle equal in length to the radius of the circle.

**0.4 Definition 4**

Consider an angle  $\theta$  in standard position that has its vertex at the center of a circle and that cuts an arc on the circle equal in length to  $s$ . The radian measure of this angle  $\theta$  is given by

$$\theta = \frac{s}{r} \text{radians,}$$

**0.5 Definition 5**

A function  $y = f(x)$  defined on  $\mathcal{D}$  is periodic if there is a positive real number  $p \neq 0$  such that whenever  $x$  and  $x + p$  are in  $\mathcal{D}$ , then

$$f(x + p) = f(x)$$

The smallest number with this property is called the period of  $f$ .