

## 8.5 Trigonometric Equations

### OBJECTIVE 1: Solving Trigonometric Equations that are Linear in Form

#### Steps for Solving Trigonometric Equations that are Linear in Form

1. Isolate the trigonometric function on one side of the equation.
2. Determine the quadrants in which the terminal side of the argument of the function lies or determine the axis on which the terminal side of the argument of the function lies.
3. If the terminal side of the argument of the function lies within a quadrant, then determine the reference angle and the value(s) of the argument on the interval  $[0, 2\pi)$ .
4. If the terminal side of the argument of the function lies along an axis, then determine the angle associated with it on the interval  $[0, 2\pi)$  choosing from  $0, \frac{\pi}{2}, \pi,$  or  $\frac{3\pi}{2}$ .
5. Use the period of the given function to determine the solutions.



**OBJECTIVE 2: Solving Trigonometric Equations that are Quadratic in Form**

**OBJECTIVE 3: Solving Trigonometric Equations Using Identities**

**OBJECTIVE 5: Solving Trigonometric Equations Using a Calculator**