**PC11**

**Simple Trigonometric Equations**

* A trigonometric equation is an equation that consists of at least one trigonometric ratio and one variable = unknown. It is important to remember that the unknown has to be the angle. Thus, the answer is always an angle measure (degrees, gradians, or radians).
* When solving simple trigonometric equations, we focus only on finding the proposed solution.
* When solving more complex trigonometric equations, it is important to solve, state restrictions, to verify the proposed solution against the restriction, and to state a general solution or a solution within required domain. You will learn about complex trigonometric equations in detail in Pre-Calculus 12.

Examples:

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| 1: Solve for $θ$ in $0°\leq θ\leq 360°$ |
| $$sinθ=\frac{-1}{ 2}$$ |
| 2: Solve for $x$ in $0°\leq x\leq 360°$ |
| $$sinx+\sqrt{3}=-sinx$$ |
| 3: Solve for $θ$ in $0°\leq θ\leq 360°$ |
| $$tan^{2}θ+tanθ=0$$ |
| 4: Solve for $θ$ in $0°\leq θ\leq 360°$ |
| $$\sqrt{2}cosθ+3=0$$ |
| 5: Solve for $θ$ in $0°\leq θ\leq 360°$ |
| $$2sin^{2}θ-1=0$$ |
| 6: Solve for $θ$ in $0°\leq θ\leq 360°$ |
| $$10cos^{2}θ+5cosθ=-3-6cosθ$$ |