Unit #3: Trigonometry
Topic: Solving Basic Trig Equations
Objective: SWBAT solve basic trig equations by using the unit circle.

Warm Up #3:

Solve the following equation for $0 \leq x \leq 2\pi$: $\quad \sqrt{2}sinx + 1 = 0$

A trig equation is an equation with the variable expressed in terms of a trigonometric function.

We can treat the trig function as the variable and use appropriate methods to solve.

Example #1: Find all values of θ for $0 \leq \theta \leq 2\pi$ if $4 + 9tan^2\theta = 7$

Example #2:　Find all solutions of $2sin^2 2x = 1$ in the interval $[0, 2\pi)$.

Homework	Assignment(s): Complete practice problems $\#1 - 16$

Problem Set #3: Solve each of the following equations for $0 \le x \le 2\pi$.

1) $2cos^2 x - \sqrt{3}cosx = 0$	2) $sin^2 x - 1 = 0$
3) $tan^2 x + tanx = 0$	4) $3sec^4 x - 6sec^2 x = 0$

5) $3\cot^3 x = \cot x$	6) $4\cos^2 x - 3 = 0$
7) $\tan x \csc x - 2\tan x = 0$	8) $3\csc^2 x - 4 = 0$
9) $3\cot^2 x + 7 = 8$	10) $2\cos^2 x + \cos x = 0$

11) $sinx - 2sinxcosx = 0$

12) $\sqrt{3}tanxsecx + 2tanx = 0$

13) $sinx + \sqrt{2} = -sinx$

14) $3tan\left(\frac{x}{2}\right) + 3 = 0$

15) $4sin^2x + 5 = 6$

16) $\frac{cscx}{5} + \frac{cscx}{3} = \frac{16}{15}$