

Warm-up!

Solve over $0 \leq \theta < 2\pi$. Then, write an expression for all of the solutions.

$$(\tan \theta)(\tan \theta + 1) = 0$$

Trig Functions, Day 6

- More Solving
- (3.12) Pythagorean Identities
- Some notation

Quiz Two Classes From Now

- Solving
- Identities

Homework:
Pythagorean Identities

Weird thing we sometimes do...

Instead of $(\sin \theta)^2$, we write...

First, solve over $0 \leq \theta < 2\pi$. Then, write an expression for ALL the solutions.

$$2 \cos^2 \theta + \cos \theta = 0$$

Solve over $0 \leq \theta < 2\pi$

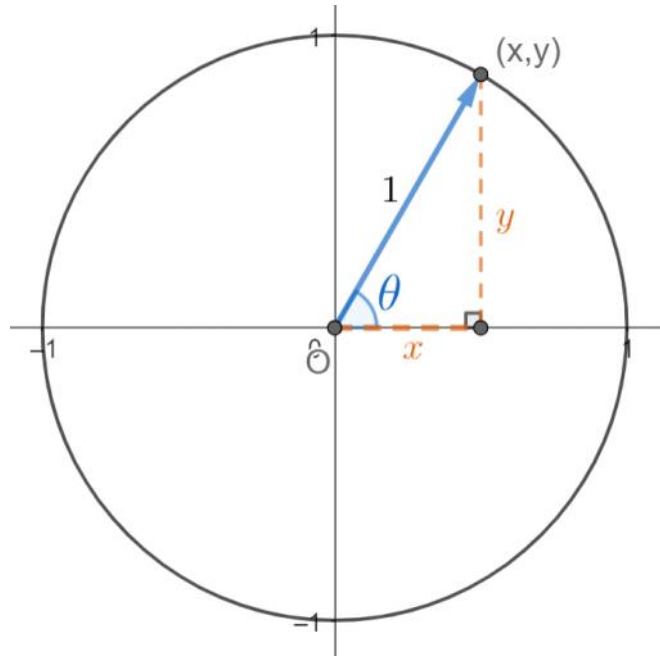
$$2 \sin^2 \theta - \sin \theta - 1 = 0$$

First, solve over $0 \leq \theta < 2\pi$. Then, write an expression for ALL the solutions.

$$2 \sin^2 \theta + 3 = 7 \sin \theta$$

The Pythagorean Identities

$$x^2 + y^2 =$$



$$\begin{aligned}\cos \theta &= x \\ \sin \theta &= y \\ \tan \theta &= \frac{y}{x} \\ \sec \theta &= \frac{1}{x} \\ \csc \theta &= \frac{1}{y} \\ \cot \theta &= \frac{x}{y}\end{aligned}$$

Solve over $0 \leq \theta < 2\pi$

$$\sin^2 \theta - \cos \theta - 1 = 0$$

Solve over $0 \leq \theta < 2\pi$

$$\tan^2 \theta = \sec \theta - 1$$

First, solve over $0 \leq \theta < 2\pi$. Then, write an expression for ALL the solutions.

$$\csc \theta \sec \theta - \csc \theta + 2 \sec \theta = 2$$

First, solve over $0 \leq \theta < 2\pi$. Then, write an expression for ALL the solutions.

$$\tan^3 \theta = 3 \tan \theta$$

$$\sin \alpha \cos \alpha = \sin \alpha$$