view:

$x^2 - 4x + 3 = 0$

$3)(x-1)=0$

$0 \mid x-1=0$

$0 \mid x=1$

2. $x^2 - 5x = 0$

$x(x-5)=0$

$x=0 \mid x-5=0$

$x=5$

3. $x = -\frac{1}{x} + 2$

$x\left(x = -\frac{1}{x} + 2\right)x$

$x^2 = -1 + 2x$

$x^2 - 2x + 1 = 0$

$(x-1)^2 = 0$

$x-1=0$

$x=1$

While some identities are true everywhere, others are only true at certain values. Today we are going to find those values. Well at least the values between 0° and 360°.

Steps to Solve a Trigonometric Equation:

. Use algebra and identities to simplify

****** ONLY ALLOWED TO HAVE ONE TRIG FUNCTION IN EQUATION******

Note: Check your answer for false roots (especially when you square both sides or have a fractio

. Use $\sin^{-1}$, $\cos^{-1}$, $\tan^{-1}$ to find our reference ∡

. Determine the quadrants S|A / T|C

. Find the angles by graphing

nples:

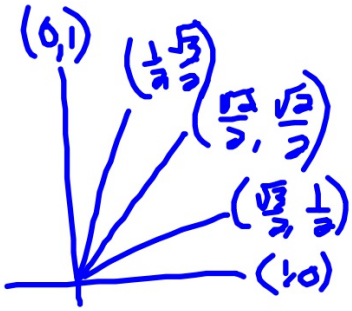
$\sin^2\theta - \sin\theta = 0$

$2x^2 - x = 0$

$\theta(2\sin\theta - 1) = 0$

$= 0 \quad | \quad 2\sin\theta - 1 = 0$

$\sin\theta = \frac{1}{2}$



$30°, 150°$

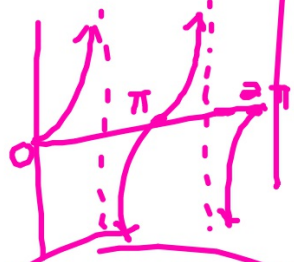
$\frac{\pi}{6}, \frac{5\pi}{6}$

2. $\tan^2\theta - 2\tan\theta = 0$

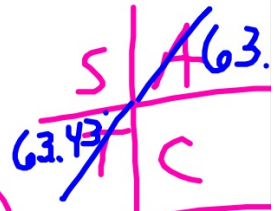
$\tan\theta(\tan\theta - 2) = 0$

$\tan\theta = 0 \quad | \quad \tan\theta - 2 = 0$

$\tan\theta = 2$



$0, \pi, 2\pi$



$63.43°$

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

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

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

$-\sin\theta-1=0$

$2\sin\theta+1)=0$

$2\sin\theta+1=0$

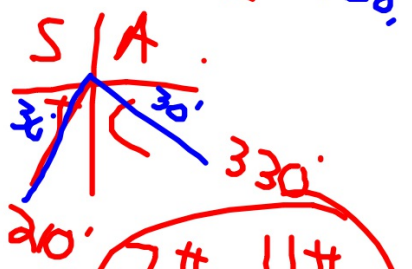
$\sin\theta=-\frac{1}{2} \rightarrow 30^\circ, \frac{\pi}{6}$

$2x^2-x-1$

x^2-x-2

$(x-\frac{2}{2})(x+\frac{1}{2})$

$(x-1)(2x+1)$



$\frac{7\pi}{6}, \frac{11\pi}{6}$

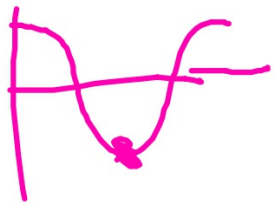
4. $\cos\theta = 1 + 2\sec\theta$

$\cos\theta\left(\cos\theta = 1 + \frac{2}{\cos\theta}\right)\cos$

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

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

$(\cos\theta - 2)(\cos\theta + 1) = 0$

$\cos\theta - 2 = 0$ | $\cos\theta + 1 = 0$

$\cos\theta = 2$ | $\cos\theta = -1$