

Solving Trig Equations:

① $4\sin^2 x - 3 = 0$
 " $4x^2 - 3 = 0$ "
 4s $\frac{4x^2}{4} = \frac{3}{4}$
 $\sqrt{x^2} = \pm \sqrt{\frac{3}{4}}$
 $\sin x = \pm \frac{\sqrt{3}}{2}$
 $x = \frac{\pi}{3}, \frac{2\pi}{3}, \frac{4\pi}{3}, \frac{5\pi}{3}$

Sep 10-2:28 PM

Solving trig equations:

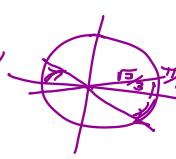
① $4\sin^2 x - 3 = 0$
 " $4x^2 - 3 = 0$ "
 $0 < \theta < 2\pi$ $\frac{4x^2}{4} = \frac{3}{4}$
 $\sqrt{x^2} = \sqrt{\frac{3}{4}}$
 $\sin x = \pm \frac{\sqrt{3}}{2}$
 $x = \frac{\pi}{3}, \frac{2\pi}{3}, \frac{4\pi}{3}, \frac{5\pi}{3}$

Sep 10-12:18 PM

② $2\sin^2 x + \sin x = 0$
 " $2x^2 + x = 0$ "
 $x(2x + 1) = 0$
 $\sin x = 0$ $2x + 1 = 0$
 $2x = -1$
 $x = 0, \pi, \frac{2\pi}{6}, \frac{11\pi}{6}$ $\sin x = -\frac{1}{2}$

Sep 10-12:27 PM

③ $\sqrt{3}\tan x + 1 = 0$
 " $\sqrt{3}x + 1 = 0$ "
 $\frac{\sqrt{3}x}{\sqrt{3}} = \frac{-1 \cdot \sqrt{3}}{\sqrt{3}}$
 $\tan x = \frac{-\sqrt{3}}{3}$
 $x = \frac{5\pi}{6}, \frac{11\pi}{6}$



Sep 10-12:32 PM

④ $\sin^2 x - 3\sin x + 2 = 0$
 " $x^2 - 3x + 2 = 0$ "
 $(x - 2)(x - 1) = 0$
 $x - 2 = 0$ $x - 1 = 0$
 ~~$\sin x = 2$~~ $\sin x = 1$
 $x = \frac{\pi}{2}$

Sep 10-12:36 PM

⑤ $2\cos^2 x - 5\cos x + 2 = 0$

Sep 10-12:40 PM

$$\begin{aligned}
 (6) \quad & 3 \sin^2 x - \cos^2 x = 0 \\
 & 3 \sin^2 x - (1 - \sin^2 x) = 0 \\
 & 3 \sin^2 x - 1 + \sin^2 x = 0 \\
 & " 3x^2 - 1 + x^2 = 0 " \\
 & 4x^2 - 1 = 0 \\
 & \sin x = \pm \frac{1}{2} \qquad \frac{4x^2 = 1}{4 \quad 4} \\
 & x = \frac{\pi}{6}, \frac{5\pi}{6}, \frac{7\pi}{6}, \frac{11\pi}{6} \qquad \sqrt{x^2 = \pm \sqrt{\frac{1}{4}}}
 \end{aligned}$$

Sep 10-1:27 PM

$$\begin{aligned}
 (7) \quad & 3 \tan^2 x + 4 \sec x = -4 \\
 & 3(\sec^2 x - 1) + 4 \sec x = -4 \\
 & 3 \sec^2 x - 3 + 4 \sec x = -4 \\
 & " 3x^2 + 4x - 1 = -4 " \\
 & 3x^2 + 4x + 1 = 0 \\
 & (3x + 1)(x + 1) = 0 \\
 & 3x + 1 = 0 \qquad x + 1 = 0 \\
 & \sec x = -\frac{1}{3} \qquad \sec x = -1 \\
 & \cos x = -3 \qquad \cos x = -1 \\
 & \qquad \qquad \qquad X = \pi
 \end{aligned}$$

Sep 10-1:32 PM