

Solving Trig Equations

1. Solve $\sin^2 x + 2 \sin x + 1 = 0$ for all x .
2. Find all x such that $\tan x = -0.7$ where x is in $[0^\circ, 360^\circ)$ or $[0, 2\pi)$.
3. Solve exactly: $2 \sin(2x + \pi/2) - 1 = 0$
4. Solve for all x in $[0, 2\pi)$: $2 \cos^2(2x + \pi/4) + \cos(2x + \pi/4) = 3$
5. Suppose a problem had the following solutions: $\pi/6 + 2k\pi$, $2\pi/3 + 2k\pi$, $7\pi/6 + 2k\pi$ and $-\pi/3 + 2k\pi$ where k is any integer. Simplify this solution.