Accel Precalc Practice Worksheet #3: Solve Trig Equations Name _____

Unit 7: Trig Identities & Equations Using Factoring and Zero Product Property

Solve each equation on the interval $0 \leq \theta \leq 2\pi$ (primary).

1. $2\cos x + 1 = 0$
2. $\sqrt{3}\sec x - 2 = 0$
3. $\sqrt{2}\sin x + 1 = 0$
4. $\cos 3x + \frac{\sqrt{3}}{2} = 0$
5. $3\csc^2 x - 4 = 0$
6. $4\cos^2 x - 3 = 0$
7. $\cos x(\cos x - 1) = 0$
8. $(3\tan^2 x - 1)(\tan^2 x - 3) = 0$
9. $\tan^2 x - 1 = 0$
10. $2\sin^2 x = 2 + \cos x$
11. $\sec^2 x - \sec x = 2$
12. $3\tan^3 x = \tan x$

Find **all (general) solutions** for the following equations.

13. $2\sin^2 x + 3\sin x - 2 = 0$
14. $2\sin^2 x - \sin x - 1 = 0$
15. $\sin x + \sin x \cos x = 0$
16. $2\cos^2 x - 5\cos x + 2 = 0$
17. $\sin^2 x = \cos x - 1$
18. $3\sin^2 x - \cos^2 x = 0$
19. $4\cos^2 x = 1$
20. $\sin^4 x - 2\sin^2 x + 1 = 0$
21. $\csc^2 x = 3\csc x + 4$