Algebra 2 / Trig H HW #_____ Name_____

Section 14.4

Date_____

#1 - 9: Solve each trigonometric equation for x, over the interval $0 \le x < 2\pi$.
(Use an identity or reciprocal function for #4-10)

1. $2 \sin^2 x + \sin x = 0$

2. $4 \cos^2 x - 4 \cos x + 1 = 0$

3. $\tan x \sec x - \tan x = 0$

4. $2 \sin x - \csc x = 0$

5. $3 \sec^2 x = 4$

6. $\cot^2 x - 1 = 0$

7. $\sin^2 x + \cos^2 x - \cos x = 0$

8. $\cos^2 x - 3 \sin x - 3 = 0$

9. $2\sin^2 x + 5\cos x + 1 = 0$

10. $\sin 2x = -\frac{\sqrt{3}}{2}$

Solve the trigonometric equation for x, over the interval $0 \le x < 360°$. Round angle measures to the nearest degree.

11. $\sec^2 x = 3\tan x - 1$

12. Solve for x, where $0 \le x < 360$. Round $\angle$s to nearest tenth.

$\tan 2x = 1$

Answers: 1. $0, \pi, \frac{7\pi}{6}, \frac{11\pi}{6}$ 2. $\frac{\pi}{3}, \frac{5\pi}{3}$ 3. $0, \pi$ 4. $\frac{\pi}{4}, \frac{3\pi}{4}, \frac{5\pi}{4}, \frac{7\pi}{4}$ 5. $\frac{\pi}{6}, \frac{5\pi}{6}, \frac{7\pi}{6}, \frac{11\pi}{6}$

6. $\frac{\pi}{4}, \frac{3\pi}{4}, \frac{5\pi}{4}, \frac{7\pi}{4}$ 7. 0 8. $\frac{3\pi}{2}$ 9. $\frac{2\pi}{3}, \frac{4\pi}{3}$ 10. 45°, 63°, 225°, 243°

10. $2\pi/3, 5\pi/6, 5\pi/3, 11\pi/6$

12. 22.5°, 112.5°, 202.5°, 292.5°