Algebra 2/Trig H HW #_____ Name_____
Section 14-4BH

Date_____

#1-9: Solve each trigonometric equation for x, over the interval $0 \le x < 2\pi$.
(Hint: 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 equations for x, over the interval $0° \le x < 360°$.
Round angle measures to the nearest tenth of a degree.

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

12. $\tan 2x = 1$

13. Graph one period of the function: $y = -2\cos\frac{1}{3}(x + \pi) + 1$

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. $\frac{2\pi}{3}, \frac{5\pi}{6}, \frac{5\pi}{3}, \frac{11\pi}{6}$

11. 45°, 225°, 63.4°, 243.4° 12. 22.5°, 112.5°, 202.5°, 292.5°