

Name: _____ Hour: _____

Solve for all $0 \leq x < 2\pi$. EXACT answers only! **Show all of your work.**

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

4. $\sec x + \cos x = \tan x \sin x - 1$

2. $2 = \sec x + \sec^2 x$

5. $\tan x - \sec x = \sqrt{3}$

3. $\sqrt{2} \csc^2 x + \csc x = \sqrt{2}$

6. $4\cos^4 x - 5\cos^2 x + 1 = 0$

7. $2 \tan^2 x - 3 \sec x + 3 = 0$

10. $\cos x - \cot x = 0$

8. $\cot x - \sqrt{3} = \csc x$

11. $\sec x = 1 + \tan x$

9. $\tan^4 x - 2 = \tan^2 x + \sec^2 x$

12. $\sin^2 x - \tan x \cos^2 x = 0$

Answers to Trig. Equations Worksheet #1:

1.) $\frac{\pi}{4}, \frac{5\pi}{4}$

2.) $0\pi, \frac{2\pi}{3}, \frac{4\pi}{3}$

3.) $\frac{5\pi}{4}, \frac{7\pi}{4}$

4.) $\frac{2\pi}{3}, \frac{4\pi}{3}$

5.) $\frac{7\pi}{6}$

6.) $\frac{\pi}{3}, \frac{2\pi}{3}, \frac{4\pi}{3}, \frac{5\pi}{3}, 0\pi, \pi$

7.) 0

8.) $\frac{4\pi}{3}$

9.) $\frac{\pi}{3}, \frac{2\pi}{3}, \frac{4\pi}{3}, \frac{5\pi}{3}$

10.) $\frac{\pi}{2}, \frac{3\pi}{2}$

11.) 0

12.) $0\pi, \pi, \frac{\pi}{4}, \frac{5\pi}{4}$