Verse:

Name:
Period:
Date:

Pre-Calc Worksheet

Trig Equations

Solve given that $0 \le x, \theta < 2\pi$

1. $\cos x - \sqrt{1 - \cos^2 x} = 0$

2. $\left(\sin x - \frac{\sqrt{3}}{2}\right)\left(\sin x + \frac{1}{2}\right) = 0$

3. $3\tan^2 \theta = 7\sec\theta - 5$

4. $2\sin^2 \theta = 3 + 3\cos\theta$

5. $2\tan^2 \theta = \sec\theta - 1$

6. $2\sin^2 x + 3\sin x + 1 = 0$

7. $2\tan^2\theta = 3\sec\theta - 3$

8. $\sqrt{\sin\theta} - \frac{\sqrt{2}}{2} = 0$

9. $\sec^2\theta - 4 = 0$

10. $\sqrt{3}\cos x - \sqrt{2-\cos^2 x} = 0$

11. (6.4)

Find an equivalent equation in polar coordinates.

a) $x = 3$ b) $y = 3$

12. (3.5)

Solve the equation (no calculator)

a) $\left(\frac{1}{2}\right)^{6x} = 8$ b) $3^{5-6x} = 243$

1. $\frac{\pi}{4}, \frac{7\pi}{4}$ 3. $\frac{\pi}{3}, \frac{5\pi}{3}$ 5. 0 7. 0 9. $\frac{\pi}{3}, \frac{2\pi}{3}, \frac{4\pi}{3}, \frac{5\pi}{3}$ 10. $\frac{\pi}{4}, \frac{7\pi}{4}$