10.3 Solving Trig Equations Part 1 Name: _____

Solve each equation on the indicated domain, show all of your work!

1. $\tan\theta + \sqrt{3} = 0$ $\theta \in \left[0^o, 360^o\right)$

2. $2\cos x + \sqrt{3} = 0$ $x \in \left[0, 2\pi\right)$

3. $2\sin\left(\theta + 82^o\right) = -1$ $\theta \in \left[0^o, 360^o\right)$

4. $\sec\left(\theta + 74^o\right) = -2$ $\theta \in \left[0^o, 360^o\right)$

5. $4\cos^2 x = 1$ $x \in \left[0, 2\pi\right)$

6. $4\sin^2 x = 3$ $x \in \left\{\text{real numbers}\right\}$

7. $\tan x - \sqrt{3} = 2\tan x \qquad x \in \{\text{real numbers}\}$

8. $\cos x + 2 = 3\cos x \quad x \in \{\text{real numbers}\}$

9. $\sin^2 x + 3\cos^2 x = 0 \quad x \in [0, 2\pi)$

10. $\sin 2x \cos x - \cos 2x \sin x = -\dfrac{\sqrt{3}}{2} \qquad x \in [0, 2\pi)$

11. $\sin 2x \sin x + \cos x = 0 \qquad x \in [0, 2\pi)$

12. $\cos 4x \cos x - \sin 4x \sin x = 0 \;\; x \in [0, 2\pi)$