

Name: _____ Date: _____ Period: _____

Section 5.1 objective 2: Solving Trig Equations Practice

Directions: Solve for x algebraically, given the domain. Show all work.

1) $4\sin x + 2 = 0, \quad 0 \leq x < 2\pi$

2) $4\sec x + 8 = 0, \quad 0 \leq x < 2\pi$

3) $\cot x - \sqrt{3} = 0, \quad 0 \leq x < 2\pi$

4) $3\cot^2 x - 1 = 0, \quad 0 \leq x < 2\pi$

5) $2\sin^2 x + 5\sin x = 3, \quad 0 \leq x < 2\pi$

6) $2\tan^2 x - \tan x - 6 = 0, \quad 0 \leq x < 2\pi$

7) $\sec x \sin x - 3 \sin x = 0, \quad 0 \leq x < 2\pi$

8) $\cos 3x = 0, \quad 0 \leq x < 2\pi$

9) $\cos 2x = -\frac{1}{\sqrt{2}}, \quad 0 \leq x < 2\pi$

a) if the domain is $0 \leq x < 2\pi$

b) if the domain is $-\pi \leq x < \pi$

10) $\cos^2 x - \cos x - 2 = 0$

a) if the domain is $-\pi \leq x < \pi$

b) if the domain is $-\frac{\pi}{2} < x < \frac{\pi}{2}$