

Name: _____ Date: _____ Per: _____

PC5-2B: Solving Trig Equations #2

Solve each equation on the interval $[0, 2\pi]$.

C. USING FACTORING: Factor the quadratic, isolate the basic trig function, then solve with Unit Circle.

[n] = number of solutions

1) $2\cos^2 \theta + \cos \theta - 1 = 0$ [3]

2) $\sin^2 \theta - 1 = 0$ [2]

3) $2\sin^2 \theta + 3\sin \theta + 1 = 0$ [3]

4) $\csc^2 \theta - 3\csc \theta + 2 = 0$ [3]

5) $\sin^2 \theta + \sin \theta = 0$ [3]

6) $2\cos^2 \theta - \cos \theta = 0$ [4]

7) $\cos^2 \theta + 3\cos \theta = 0$ [2]

8) $\sec^2 \theta - \sec \theta - 2 = 0$ [3]

D. USING IDENTITIES: Use identities to write each equation as a single function. Use previous techniques to solve.

9) $\sin^2 \theta = 2 \cos \theta + 2$ [1]

10) $3 \sin \theta = 2 \cos^2 \theta$ [2]

11) $\csc^2 \theta = \cot \theta + 1$ [4]

12) $\tan \theta = 2 \sin \theta$ [4]

13) $2 \sin^2 \theta + 3 \cos \theta - 3 = 0$ [3]

14) $2 \sec^2 \theta - \tan^2 \theta + 2 \tan \theta = 1$ [2]