

**PC5-2B: Solving Trig Equations #2****Work on a separate sheet of paper**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]

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