Solving with Factoring & Identities - Round 2

Date_____ Period____

Factor to solve each equation for $0 \le \theta < 2\pi$.

1) $3\tan\theta + 2\sqrt{3}\tan\theta\cos\theta - \cos\theta = -\cos\theta$

2) $2\tan\theta\cos\theta - 2\cos\theta = \sqrt{3}\tan\theta - 2\cos\theta$

3) $\sqrt{3}\csc^2\theta = -2\csc\theta$

4) $-\sec^2\theta = \sqrt{2}\sec\theta - 2\sec^2\theta$

Use a Pythagorean Identity to solve each equation for $0 \le \theta < 2\pi$.

5) $2\cot\theta = \csc^2\theta$

6) $\csc\theta + 1 = \cot^2\theta$

7) $-3\csc\theta = -\cot^2\theta - 3$

8) $-1 + \csc\theta = -\cot^2\theta$