Name: _____ Date: _____

Instructions: Please complete the following problems for extra practice before the exam.

Problem 1. True or False: All solutions of $\tan x = -1$ are given by the general solution equation: $-\frac{\pi}{4} + 2n\pi$

Problem 2. Verify: $\frac{\sin\theta}{1+\cos\theta} + \frac{\sin\theta}{1-\cos\theta} = 2\csc\theta$

Problem 3. Use the half-angle formula to find $\cos(15°)$

Problem 4. Find the exact value of: $\cos(50°)\cos(10°) - \sin(50°)\sin(10°)$

Problem 5. Let $\sin\theta = \frac{4}{5}$ in Q2, and $\cos\alpha = \frac{5}{13}$ in Q4, find $\cos(\theta + \alpha)$

Problem 6. Given $\sin\theta = \frac{2}{3}$ in Q1, find $\sin(2\theta)$

Problem 7. Find the general solution equations for: $2\sin(\frac{1}{2}x - \frac{\pi}{4}) + \sqrt{3} = 0$

Problem 8. Find the general solutions and all the solutions in the interval $[0, 2\pi]$ for: $(\sqrt{3}\tan\theta + 1)(2\cos\theta + 1) = 0$