PRECALC AB PERIOD: _____ NAME:_____

Pre-Comp Review - Trig Equations

1. Solve for x algebratically. Show your work.

   (a) $4\sin x + 5 = 0$, $0 \le x < 2\pi$

   (b) $4\sec x + 8 = 0$, $0 \le x < 2\pi$

   (c) $\cot x - \sqrt{3} = 0$, $0 \le x < 2\pi$

   (d) $3\cot^2 x - 1 = 0$, $0 \le x < 2\pi$

   (e) $2\sin^2 x + 5\sin x = 3$, $0 \le x < 2\pi$

   (f) $4\sec^2 \frac{x}{2} - 7\sec \frac{x}{2} - 2 = 0$, $0° \le x < 360°$

   (g) $3\csc^2 \frac{x}{2} - 2\csc \frac{x}{2} - 1 = 0$, $0° \le x < 360°$

   (h) $4\sin^2 x - 3 = 0$, $0° \le x < 360°$

2. Solve for x algebraically. Show your work.

   (a) $\cos 2x = -\frac{1}{\sqrt{2}}$ (i) if $0 \le x < 2\pi$ (ii) if $-\pi \le x < \pi$

   (b) $\cos 2x = -\frac{1}{\sqrt{2}}$ (i) if $0 \le x < 2\pi$ (ii) Give the general solution

(c) $\cos^2 x - \cos x - 2 = 0$ (i) if $-\pi \leq x < \pi$ (ii) if $-\frac{\pi}{2} < x < \frac{\pi}{2}$

3. Solve $2\sin^2 x - 1 = 0$ algebraically. Give the general solutions.

4. How many solutions are there in the interval $0 \leq x < 2\pi$ to the following:

   (a) $\cos 5x = 0$

   (b) $\sin 4x = 1$

   (c) $(2\sin 3x - 1)(\cos 2x + 1) = 0$