Problems PreCal 1508 PLTL Workshop, November 16, 2011 PLs: Alex Knaust, Edith Mejia. Lecturer: Yi-Yu Liao

Please do the problems that you feel will help your group the most first (you don't have to do them in order). All handouts are available at http://alex.knaust.info/pltlfall2011/

- 1. Solve the following equations
 - (a) $2\cos x + 1 = 0$
 - (b) $(3\tan^2 x 1)(\tan^2 x 3) = 0$
 - (c) $2\sin^2 2x = 1$
 - (d) $\sec x + \tan x = 1$
 - (e) $\sec^2 x \sec x = 2$
 - (f) $2\sin x + \csc x = 0$
- 2. Find the following values
 - (a) $\arcsin(\sin(\frac{\pi}{4}))$
 - (b) $\sin(\arcsin(\frac{1}{\sqrt{2}}))$
 - (c) $\arctan(-\sqrt{3})$
 - (d) $\arcsin(\sin(\frac{\pi}{3}))$
- 3. Verify the following identities
 - (a) $tan^5x = tan^3 x \sec^2 x tan^3 x$
 - (b) $\sin^4 x + \cos^4 x = 1$