Math 111               Quiz #1               October 3, 2014

• This is a closed-book quiz. No books, notes, calculators, cell phones, communication devices of any sort, or webpages, or other aids are permitted.

**1.** [10 points] Please fill out each of the following trigonometric values:

(a) $\tan \dfrac{\pi}{3} =$

(b) $\cos \dfrac{\pi}{3} =$

(c) $\cos \dfrac{\pi}{4} =$

(d) $\sin \dfrac{\pi}{6} =$

(e) $\cos \dfrac{\pi}{6} =$

(f) $\sin \dfrac{\pi}{4} =$

(g) $\sin \dfrac{\pi}{3} =$

(h) $\tan \dfrac{\pi}{6} =$

(i) $\tan \dfrac{\pi}{4} =$

**2.** [6 points] Please sketch each of the following trigonometric function, for at least $-\pi \leq x \leq 2\pi$:

(a) $y = \sin x$

(b) $y = \cos x$

(c) $y = \tan x$

**3.** [4 points] Please write the derivative of each of the following trigonometric functions:

(a) $y = \sin x$

(b) $y = \cos x$

(c) $y = \tan x$

(d) $y = \sec x$