Math 220: Calculus I
Worksheet 23
April 16, 2013

1. What is the average value of $f(x) = (3 - 2x)^{-1}$ on the interval $[-1, 1]$?

2. Find the volume of the region defined by $x = y^2 + 1$, $x = 2$, and $y = 0$ when rotated about the line $x = -2$.

3. Use a linear approximation to estimate $\tan(44°)$.

4. Use a linear approximation to estimate the location of a root of the function $f(x) = x^3 + x^2 - 5$. (You have freedom when choosing a, so there are many correct answers)