Math 181 Name _____
Spring 2010

Homework #2
Due Thursday, March 4
No late papers accepted! No excuses!

1. Find the length of the curve

$$y = \sqrt{1 - x^2} \quad -1/2 \le x \le 1/2$$

2. Find the center of mass of a thin plate covering the region bounded below by the parabola $y = x^2$ and above the line y = x if the plate's density at the point (x, y) is $\delta(x) = 12\ x$.

3. Find the volume of the solid generated by revolving the region bounded by $y = 2x - x^2$ and $y = x$

a) about the y-axis

b) about the x-axis