Math 181 Name _____
Fall, 2009

Homework #1
Due Monday, August 31
No late papers accepted! No excuses!

1. Find the volume of the solid obtained by rotating the region bounded by the curves $y = 2 - x^2$ and y = 1 about the x-axis.

2. A solid of circular base of radius 1. Parallel cross-sections perpendicular to the base are equilateral triangles. Find the volume of the solid.

3. Find the volume of the solid obtained by rotating the region bounded by the curves $4y = x^2$ and $x = 2y - 4$ about the line x = 5.

4. Find the volume of the solid obtained by rotating the region bounded by $f(x) = x^2$ and $g(x) = \frac{1}{x}$ and the line y = 3 about the x-axis.