Practice Quiz 9 (L27-L29)

1. Find the volume of the solid which lies between the planes perpendicular to the x-axis at $x = 1$ and $x = -1$, whose cross sections perpendicular to the x-axis are circular disks whose diameters run from the parabola $y = x^2$ to the parabola $y = 2 - x^2$. (See page 371 problem 2)

2. Find the volume of the solid obtained by rotating the region bounded by $y = \sqrt{3}$, $x = 3$, and $x = 3 - y^2$ across the x-axis. (See page 379 problem 4)

3. Find the surface area of the surface obtained by revolving the curve segment $y = x^3$, $0 \leq x \leq 2$, about the x-axis.