**MATH 162 Practice Quiz 1B**

1. Let *R* be the region in the xy-plane bounded by the curves y = 4 – x2 and y = 0. Find the volume of the solid obtained by rotating *R* about each of the following axes. *Sketch.* Express each answer as a definite integral. *Do not evaluate!*

1. x-axis
2. y = -3
3. y = 7
4. x = 3

2. Let *R* be the region bounded by the line y = x + 6 and the parabola y = x2. Assume that *R* is rotated about the line x = - 6. Using the method of shells, write an integral that expresses the volume of the solid of revolution generated by R. Do not evaluate the integral. Sketch!

***Extra Credit:*** Find the volume that remains after a hole of radius 1 is bored through the center of a solid sphere of radius 2.