RECITATION II

NAME:

Problem 1. (Online homework 6.1.31) Find the volume of the solid generated by revolving the region about the given line. The region in the first quadrant bounded above by the line $y = \sqrt{2}$, below by the curve $y = \csc(x)\cot(x)$ and on the right by the line $x = \frac{\pi}{2}$, about the line $y = \sqrt{2}$.

Problem 2. (Online homework 6.1.47) Find the volume of the solid generated by revolving the region enclosed by the triangle with vertices $(3, 1)$, $(3, 4)$ and $(7, 4)$ about the y-axis.

Problem 3. (Online homework 6.1.51) The region in the first quadrant bounded above by the curve $y = x^2$, below by the x-axis, and on the right by the line $x = 2$, about the line $x = -1$.

Problem 4. Find the volume of the solid generated by revolving the region in the first quadrant bounded by $y = x^2$, $y = 2 - x^2$ and $x = 0$ about the line $x = 3$, via a) washer method; b) cylindrical shells.

Problem 5. Using the shell method, find the volume of the solid generated by revolving the enclosed region in the first quadrant bounded by $y = 4 - x^2$, $y = 4$ and $x = 2$ about the line $x = -1$.