

To receive credit you **MUST SHOW ALL YOUR WORK**. Answers which are not supported by work will not be considered.

1. (a) (5 pts) Find the area of the region between the curves $y = x^2$, $y = 2x$. Sketch of the region and computation are required.

(b) (5 pts) The region in part (a) is rotated around the vertical line $x = 2$. Sketch the solid and then set up, but *do not evaluate*, an integral which represents the volume of this solid. You'll receive 2 bonus points if you give two correct solutions for part (b), one using slices and the other using cylindrical shells.