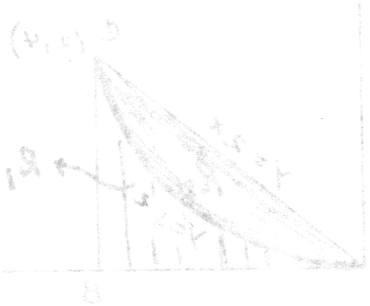
2. Find the volume when the region bounded by $y = \sqrt{x}$, $y = 0$, and $x + y = 2$ is revolved about the following axis. Set up two ways.

(a) x axis



(b) line y = 8

(c) line $x = -2$

3. Find the volume when the area bounded by $x + y = 3$ *and* $x = 4 - (y-1)^2$ is revolved about the y axis. Set up two ways.

4. Find the area when the region bounded by

$y = \sin x$, $y = \cos x$, $y = 1$, $x = 0$ *and* $x = \frac{\pi}{2}$ is revolved about the line $y = 1$.