

For each three dimensional object described below,

- (a) Sketch the solid described
- (b) Set up an integral that gives you the volume of the object
- (c) Evaluate the integral to find the volume

1. The region bounded by $y = 4 - 2x$ in the first quadrant is rotated about the x -axis
2. The region from #1 is rotated about the y -axis
3. The region bounded by $y = \sqrt{x}$, $y = 2$, and $x = 0$ is rotated about the y -axis
4. The region from #1 is rotated about the line $y = -3$
5. The region from #3 is rotated about the line $x = 4$