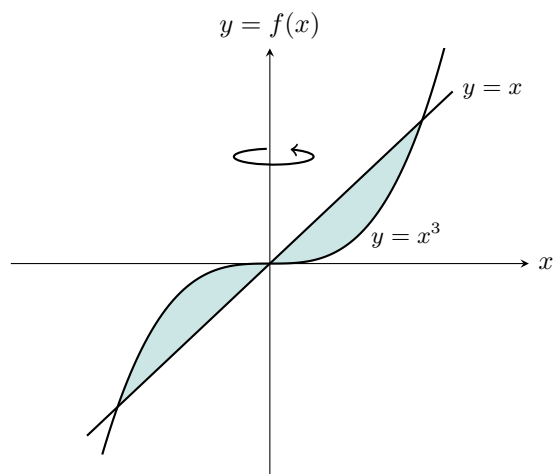


Worksheet 4
Volume by Shells

MATH 2205, Fall 2018

1. Find the volume of the solid obtained when the shaded region is revolved about the y -axis in Figure 1 using the shell method.

**Figure 1**

2. Find the volume of the solid obtained when the shaded region is revolved about the x -axis in Figure 2. Use the shell method.

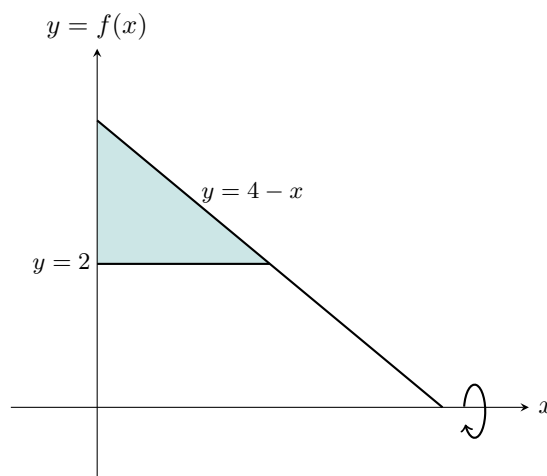


Figure 2

3. Find the volume of the solid obtained when the shaded region is revolved about the y -axis seen in Figure 3. Use the shell method.

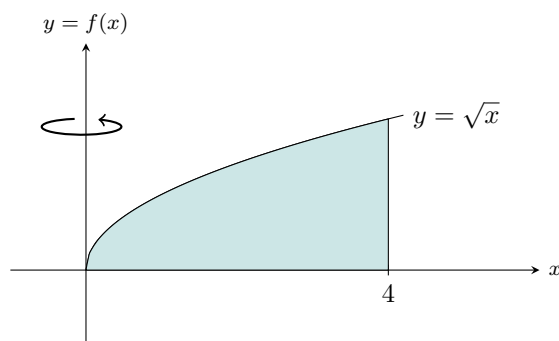


Figure 3

4. Find the volume of the region bounded by $y = x^2$, $y = 2 - x$ and $x = 0$ in the first quadrant, revolved around the y axis. Use whichever method you like.