

1. Consider the region bounded between $y = x$ and $y = x^4$. Use the cylindrical shell method to find the volume when this region is rotated around the y -axis.
2. Do the same problem as above, but use the washer method.

3. Consider the region between $y = -(x - 1)(x - 3)$ and $y = \frac{1}{2}(x - 1)$ rotated around the y -axis.

a. What about this problem makes it difficult to use the washer method?

b. Use the washer method to find the volume.