Volume by Washer Method

The disk method can be extended to cover solids of revolution with holes by replacing the representative disk with a representative **washer**. The washer is formed by revolving a rectangle about an axis.



8. Find the volume of the solid formed by revolving the region bounded by the graphs of $y = \sqrt{x}$ and $y = x^2$ about the...

a) x-axis.

b) y-axis

c) line y = -1

d) line y = 3

e) the line x = 2

f) the line x = -3

9. Find the volume of the solid formed by revolving the region bounded by the graphs of $y = x^2 + 1$, y = 0, x = 0, and x = 1 about the y-axis.

10. Find the volume of the solid generated by revolving the region bounded by $y = x^2$, y = 0, and x = 2 about the line x = 3.