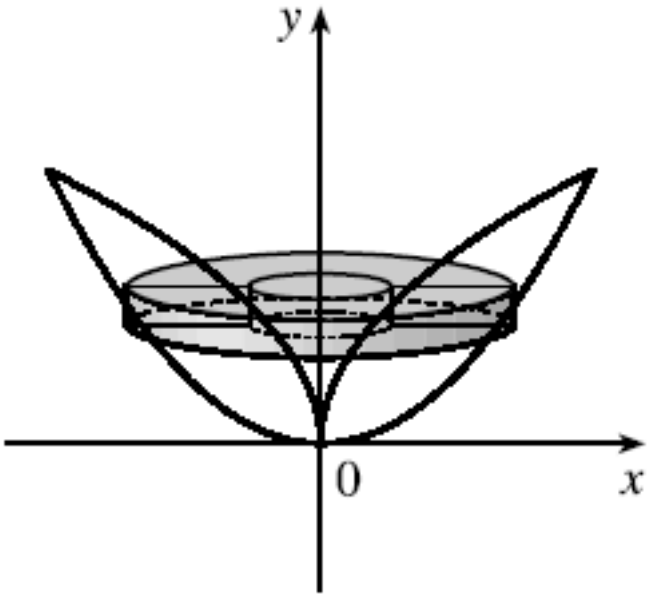
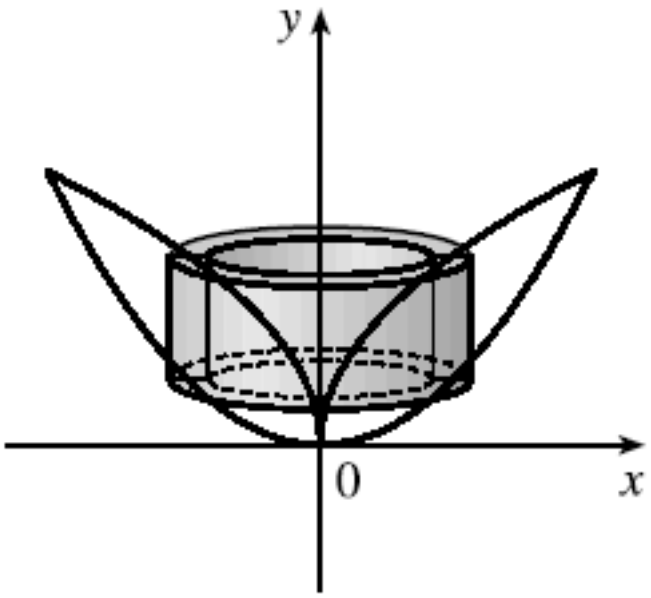
By slicing: $V = \int_0^{16} \pi \left[\left(\sqrt{16y}\right)^2 - \left(\frac{y^2}{16}\right)^2 \right] dy = \pi \int_0^{16} (16y - \frac{y^4}{256}) dy$
$= \pi [\frac{16}{2} y^2 - \frac{1}{1280} y^5]_0^{16} = \pi (2048 - \frac{4096}{5}) = \frac{6144}{5}\pi$



By cylindrical shells: $V = \int_0^{16} 2\pi x \left(\sqrt{16x} - \frac{x^2}{16}\right) dx = 2\pi \int_0^{16} (4x^{3/2} - \frac{x^3}{16}) dx$
$= 2\pi [\frac{8}{5} x^{5/2} - \frac{1}{64} x^4]_0^{16} = 2\pi (\frac{8192}{5} - 1024) = \frac{6144}{5}\pi$


y
0
x