Full Name: \_

- 1. Sketch the region enclosed by the graphs of the given equations. Then, use a definite integral to find the exact value of the volume of revolution obtained by rotating the region about the given axis of revolution.
  - (a)  $\frac{39366}{5}\pi$

(b)  $\frac{40581}{5}\pi$ 

(c)  $\frac{1048}{105}\pi$ 

(d)  $\pi \ln 3$ 

(e)  $\approx 132.85$ 

(f)  $2\pi(\ln 2)^2$