Revolutions of Solids
Demonstration Activity

1) Open the Revolution of Solids Demonstration located at
   http://demonstrations.wolfram.com/SolidsOfRevolution/

2) First get familiar with the various options. Choose a region. Choose front or back. Adjust the slider for θ. Check and uncheck the boxes at the bottom. Be sure to click on the solid (hold down the mouse button) and move the mouse around to rotate the picture.

3) Click on region 1. Describe what the 3-dimensional picture looks like.

4) Click on region 2. Describe what the 3-dimensional picture looks like.

5) Region 1 can be approximated by the region bounded by the following curves rotated around $y = -1$:

   $$16y = -3x + 12,\ y = x^2 + 1,\ x = 6,\ x = -1$$

   Find the volume of solid of revolution using an integral. Show all work.