Volume: The Disc Method  
Section 7.2e

Revolving the Area Between Two Curves Around the y-axis

We’re going to get a little more practice with revolving the area between two curves but now we’re going to revolve around a vertical axis instead of a horizontal one. We’ll practice with the problem below.

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

Sketch these graphs on the same coordinate plane in the space below.

1. Find the limits of integration.
2. Set up the integral(s) and solve.