Name: $\qquad$ Section Day and Time: $\qquad$
Complete the following problems, making sure to SHOW ALL WORK. If you're stuck on something, CLEARLY EXPLAINING what you do know or what you would do will get you partial credit!

1. Consider the region bound between the functions $y=x^{2}+1, y=0, x=0$, and $x=1$, which has been marked below.


Find the volume of the solid obtained by rotating the given region about the $y$-axis. You may use any method you'd like, but make clear what you've done.

