Rotate Integrals Cheatsheet

1 Disk Method

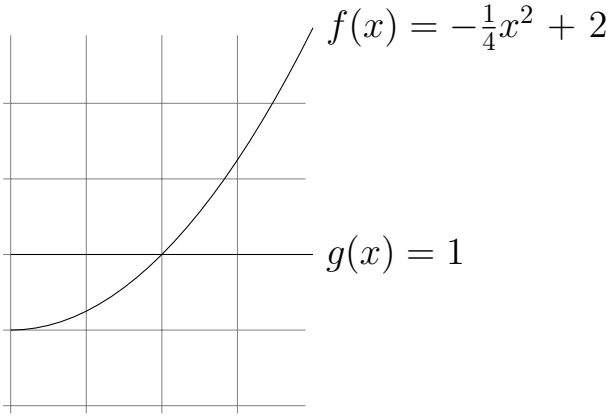
When you have a function $f(x)$ you can rotate it around the x-axis like this:

$$\pi \int_a^b (f(x))^2 dx$$

Essentially, you are adding up many πr^2 Areas multiplied by width, or dx. So you're adding up a bunch of tiny volumes.

2 Washer Method

Subtract two Volumes to rotate it around the x-axis.



3 Cross-Sections

3.1 Triangle Cross Section