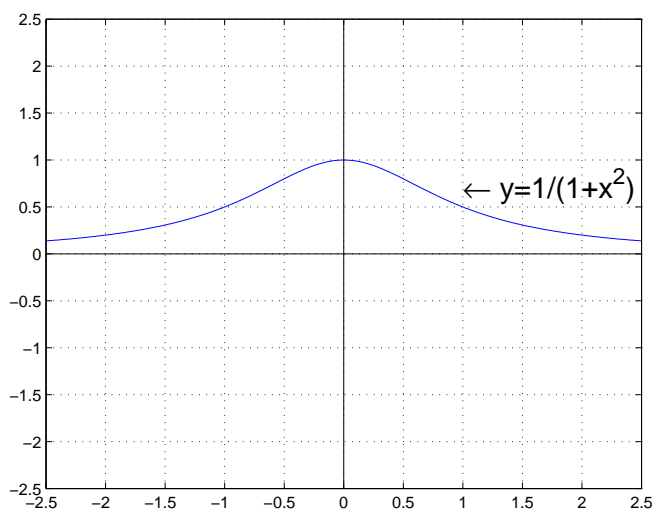# Challenge 2

The evil wizard Mattulio has just bought a new powerful magical rod. This rod is so magical that its length is infinite. Despite that, Mattulio would like to know what the volume of his rod is to know if he would be able to carry it around (a rod with infinite volume would also have infinite weight!).

The rod is obtained by rotating the region in between the curve $y = \frac{1}{1+x^2}$ and the line $y = 0$ around the x-axis. What is the volume of the rod?

Hint: You will need the magical powers of algebra to integrate this one.