

Math 125 Worksheet #5

July 19, 2007

1. Let R = the region bounded by $x = y^2 - 2y$ and the y -axis. Find the volume of the solid obtained by revolving R about the x -axis using cylindrical shells.
2. Find f_{ave} = the average value of the function $f(x) = (x + 1)^2$ on the interval $[-1, 2]$. Find a value c such that $f(c) = f_{ave}$.
3. Find the average value of the function $g(x) = \frac{2\sin x}{1+\cos^2 x}$ on the interval $[0, \pi]$.