

NAME: _____

MATH 12003

HOMEWORK #4 (12 pts)

FALL 2009

SHOW ALL WORK FOR FULL CREDIT — PLEASE CIRCLE YOUR FINAL ANSWER

DUE: TUESDAY, OCTOBER 6, 2009 AT THE BEGINNING OF CLASS

(3 pts each) Find the volume of the solid obtained by rotating the region bounded by the given curves about the specified line.

1. $y = 5x$, $y = x^2$, $y = 0$, $x = 3$ about the x -axis.

2. $y = 3 - x^2$, $y = 3x - 1$, $x = 0$ about the y -axis.

3. $y = x$, $y = 0$, $x = 2$, $x = 4$ about $x = 1$.

4. $y = 1 - x^4$, $x = 0$, $y = 0$ about $x = 2$.

5. $x = 9 - (y - 3)^2$, $x = 0$ about $y = -2$