

WRITE YOUR NAME:

MAC 2312 Homework 3
Due in class, Friday February 9th
You can use more paper if necessary, but please STAPLE

Question 1. Evaluate the integral.

$$\int_{\pi/12}^{\pi/9} \sec^2 3x \, dx$$

Question 2. Notice that the curves $y = x^2 + 4$ and $y = x^3$ intersect when $x = 2$. Let A be the region bounded by those two curves and the y -axis. Find the volume obtained by revolving the region A around the x -axis.

Question 3. Find the volume of the solid that results when the region enclosed by $y = x^2$ and $y = x^3$ is revolved around the line $y = -1$.