

Name:

This quiz covers: 6.1 and 6.2 DUE: Monday 3/5

Directions: Complete all questions and **show all applicable work**. Partial credit will be given.

1.) Given the functions:

$$y = \frac{1}{4}x^2 \quad \text{and} \quad y = 5 - x^2$$

Find the area between the two curves.

2.) Given the functions:

$$y = \frac{x^2}{4} \quad \text{and} \quad y = 5 - x^2$$

Find the volume formed by rotating the enclosed region around the x-axis.

3.) Given the functions:

$$y = \sqrt{x} \quad \text{and} \quad x = 4$$

Find the area between the two curves. Hint: Integrate with respect to y .

4.) Given the functions:

$$y = \sqrt{x} \quad \text{and} \quad x = 4$$

Find the volume formed by rotating the enclosed region around the y -axis.