

**Math 165: Honors Calculus I**

Name: \_\_\_\_\_

**Quiz 5** *October 7, 1999*

1. Find the area between the graphs of  $f(x) = x^3 - 3x^2 + 3x$  and  $g(x) = x^2 - 2x + 2$  on the interval  $[0, 3]$ .

2. Calculate the average value of  $f(x) = \sqrt{x}$  on the interval  $[1, 4]$ .

3. If  $\pi$  denotes the area of the circular disk of radius 1, prove that the area of a circular disk of radius  $r$  is  $\pi r^2$ .