

Math 240 Fall 2011  
Quiz 4  
TA: Matti Åstrand

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

Show all work clearly and in order, and box your final answers. You have 10 minutes to take this quiz.

**1.** (5 points) Find the area in the first quadrant bounded by the curve  $r = \theta$ , where  $\theta$  goes from 0 to  $\pi/2$ .

**2.** (10 points) Use Green's theorem to find the following line integral, where  $C$  is the unit circle  $x^2 + y^2 = 1$ .

$$\oint_C (e^x + 2xy - 1)dx + (e^{-y^2/2} + x^2 + x)dy$$