Name: November 3, 2016 MAC 2313.9722 Cyr

Quiz 10 You must show all work to receive full credit!! **Problem 1.** (5 points) Use polar coordinates to evaluate  $\iint_D \arctan\left(\frac{y}{x}\right) dA$ , where  $D = \{(x, y) \mid 1 \le x^2 + y^2 \le 4, 0 \le y \le x\}.$ 

**Problem 2.** (5 points) Evaluate  $\iiint_E xydV$ , where *E* lies under the plane z = 8+8x+3y and above the region in the *xy*-plane bounded by the curves y = x, y = 0, and x = 1.