Math 301   Quiz #1a   September 7, 2014
Name:... ID:....................................

Exercise # 1: Find the directional derivative of

$$f(x, y) = \mathbf{e}^{-3xy} \cos(3y)$$

at $(1, \frac{\pi}{3})$ in the direction of the vector $u = 2i + j$.

Exercise #2: Find the divergence of the vector field

$$F(x, y, z) = x^2 y i - y^2 z j + \mathbf{e}^x y k$$