

Math 241 X8**Name:****Quiz # 6**

October 24, 2013 No electronic devices or interpersonal communication allowed. Show work to get credit.

- (1) [12pts] Find all sources and sinks of $\mathbf{F}(x, y) = \left\langle \frac{y}{x^2 + y^2}, \frac{-x}{x^2 + y^2} \right\rangle$.

- (2) [8pts] Consider the vector field $\mathbf{F}(x, y) = \langle 3x + 2y, -4x + 9y \rangle$, and the curve C shown below. The area of the region bounded by C is 3π . Compute the flow of \mathbf{F} along C . Which direction is it?

