Name:

Math 208, Section 3

Quiz number 10

Show all work. How you get your answer is just as important, if not more important, than the answer itself. If you think it, write it!

Determine which of the following vector fields are path-independent:

(a): $\vec{F}(x,y) = (3x^2y - y^2, x^3 - 2xy + \dfrac{1}{y})$

(b): $\vec{G}(x,y) = (\sin(xy), x\cos(xy))$

(c): $\vec{H}(x,y) = (ye^{x+y}, ye^{x+y})$