

Name: _____

Exercise 1 Let $f(x, y) = \frac{x^2 + x^3y + y^2}{x^2 + 2y^2}$. Explore $\lim_{(x,y) \rightarrow (0,0)} f(x, y)$ either proving it does not exist or hypothesizing its value. If it seems that it does exist, prove your hypothesis. Graph the function in Geogebra and get a few print-screen shots organized on a single-page (one-sided) word document to print and attach.