Quiz 1 week 2

$$f(x,y) = \frac{x^3 y}{x^6 + y^2}$$

Let $x = 0$

$$\lim_{x,y \to 0,0} \frac{x^3 y}{x^6 + y^2} = \frac{(0)^3 y}{(0)^6 + y^2} = \frac{0}{y^2} = 0$$

$$0 \leq \left| \frac{x^3 y}{x^6 + y^2} \right| \leq \left| \frac{x^3 y}{y^2} \right| = \left| \frac{y^4}{y^2} \right| = |y^2| \to 0$$

$x \approx y$ By ST the limit = 0

Def $f(0,0) = 0$ to be cont.