

EXAMPLE 1.) : Evaluate each of the following limits or determine that the limit does not exist.

a.) $\lim_{(x,y) \rightarrow (1,1)} \frac{x^2 - y^2}{y - x}$

b.) $\lim_{(x,y) \rightarrow (0,0)} (1 + xy)^{1/xy}$

c.) $\lim_{(x,y) \rightarrow (0,0)} \frac{x^2 y}{x^4 + y^2}$