

Def Limit of $f(x,y)$

limit of $f(x,y)$ as (x,y) approaches (a,b) is $L \iff \forall \epsilon > 0, \exists \delta > 0$ s.t.

$$(x,y) \text{ with } \sqrt{(x-a)^2 + (y-b)^2} < \delta$$

$$\Rightarrow |f(x,y) - L| < \epsilon$$

Continuity

f is continuous at $(a,b) \iff \lim_{(x,y) \rightarrow (a,b)} f(x,y) = f(a,b)$