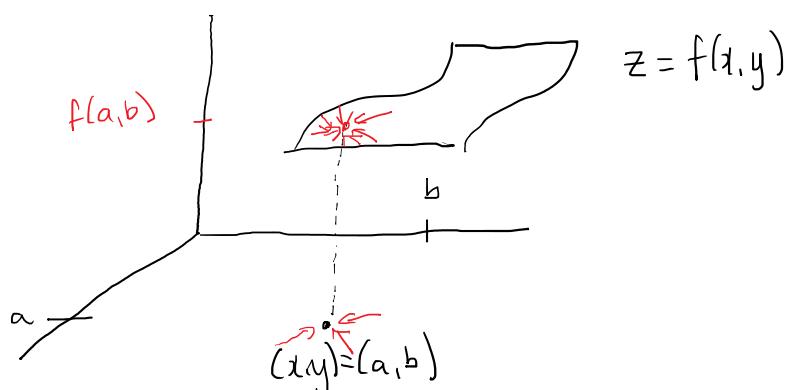


12.3 Limits and Continuity

Def

A function $f(x,y)$ is **continuous at the point**
 $(x,y) = (a,b)$ if $\lim_{(x,y) \rightarrow (a,b)} f(x,y) = f(a,b)$



Def

A function $f(x,y)$ is continuous if it is continuous at all points (x,y) in \mathbb{R}^2

Typical continuous functions:

- Multivariable polynomials e.g. $x^4 y^3 - 7x^3$
- Exponential, sine and cosine functions e.g. e^{2x-3y}
 $\sin(x^2+y^2)$
- Sums, products and differences of the above