$$f(x,y) = 4 - x^2 - y^2$$



$$f(x,y) = 4 - x^2 - y^2$$



$$f(x,y) = 4 - x^2 - y^2 = C$$



$$f(x,y) = 4 - x^2 - y^2 = C$$
 with ∇f drawn



$$f(x,y) = 1 - x + y$$



$$f(x,y) = 1 - x + y = C$$



$$f(x,y) = 1 - x + y = C$$
 with ∇f drawn



$$f(x,y) = 1 - x^2 + y^2$$



$$f(x,y) = 1 - x^2 + y^2$$



$$f(x,y) = 1 - x^2 + y^2 = C$$



$$f(x,y) = 1 - x^2 + y^2 = C$$
 with ∇f drawn





$$f(x,y) = xy$$



$$f(x,y) = xy$$

~ /





$$xy = C$$



If f(x, y) = xy, find a unit vector $\vec{\mathbf{T}}$ such that:

$$D_{\vec{\mathbf{T}}} f(2, 1) = 0$$

