Answer on Question #55097 – Math – Calculus

If f(x,y) = 4x^3 - 3y^2, find fx

Solution

If $f(x,y) = 4x^3 - 3y^2$, then the partial derivative of $f(x,y)$ with respect to *x* is the following:

$$f_x = \frac{\partial f(x,y)}{\partial x} = \frac{\partial}{\partial x}(4x^3 - 3y^2) = \frac{\partial}{\partial x}(4x^3) - \frac{\partial}{\partial x}(3y^2) = 12x^2 - 0 = 12x^2 .$$

Answer: $f_x = 12x^2$.