Homework 8 of Introduction to Analysis(II)

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1. $f_x(0,0) = \lim_{h\to 0} \frac{|f(h,0)-f(0)|}{|h|} = |\lim_{h\to 0} \frac{h\cdot 0\cdot(h^2-0)}{h^3}| = 0$ exists. Also, we can esaily get that $f_y(0,0) = 0$.

   Then, $f_{xy}(0,0) = \frac{\partial f_x}{\partial y}(0,0) =$