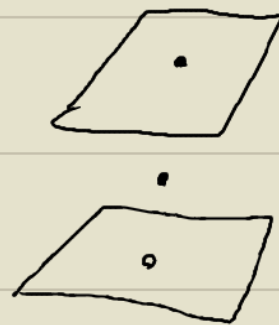


$$10. f(x, y) = \begin{cases} \frac{9x^4 - y^4}{3x^2 + y^2}, & (x, y) \neq (0, 0) \\ 0, & (x, y) = (0, 0) \end{cases}$$



$$\frac{\cancel{(3x^2 + y^2)} (3x^2 - y^2)}{\cancel{3x^2 + y^2}}$$

$$\lim_{(x, y) \rightarrow (0, 0)} 3x^2 - y^2 = 0 = 0$$

$$\text{CONT: } \left\{ (x, y) \mid \begin{array}{l} x \text{ IS A REAL \#} \\ y \text{ IS A REAL \#} \end{array} \right\}$$

$$g(x, y) = \begin{cases} \frac{9x^4 - y^4}{3x^2 + y^2} & (x, y) \neq (0, 0) \\ \partial & (x, y) = (0, 0) \end{cases}$$

$$\lim_{(x, y) \rightarrow (0, 0)} 3x^2 - y^2 = 0 = \partial$$

$$\text{CONT: } \left\{ (x, y) \mid (x, y) \neq (0, 0) \right\}$$