

## MATH 147 Review: Partial Derivatives

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1. Let  $f(u, v) = u^2 \sin(u + v^3) - \sec(4u) \tan^{-1}(2v)$ . Find  $f_u$  and  $f_v$ .
2. Let  $f(x, y) = \frac{x^2}{y^2+1} - \frac{y^2}{x^2+y}$ . Find  $f_x$  and  $f_y$ .