

$$g) f(x, y) = \frac{x^2 - y}{x}$$

$$f_x = \left[\frac{x^2 - y}{x} \right]'$$

$$u = x^2 - y$$

$$u' = 2x$$

$$v = \frac{1}{x}$$

$$v' = -\frac{1}{x^2}$$

$$\left(\frac{u}{v} \right)' = \frac{u'v - uv'}{v^2}$$

$$f_x = \frac{2x \cdot \frac{1}{x} - (x^2 - y) \cdot \left(-\frac{1}{x^2} \right)}{x^2}$$

$$\cancel{f_x} = \frac{\cancel{2x^2} - \cancel{x^2} + y}{\cancel{x^2}} = \frac{\cancel{x^2} + y}{\cancel{x^2}}$$

$$f_x = \frac{2 - \left(1 + \frac{y}{x^2} \right)}{\left(\frac{1}{x} \right)^2}$$