Quiz

Find the following partial derivatives.

1. \( w = uv^3 + 3u^4 + \sin(3v) \)

   \( w_u = \)

   \( w_v = \)

2. \( f(x, y) = \frac{x^2 + xy}{x^2 + y^3} \)

   \( \frac{\partial f}{\partial x} = \)

   \( \frac{\partial f}{\partial y} = \)

3. \( h(r, \theta) = \sqrt{r^3 + \tan(\theta)} \)

   \( h_r = \)

   \( h_\theta = \)

4. \( H(x, y) = 5^{x^2} + 2^y(x^3y^3 - 8) \)

   \( \frac{\partial H}{\partial x} = \)

   \( \frac{\partial H}{\partial y} = \)