

Quiz

Name: _____

1. Let $H(x, y) = \frac{ye^{2x}}{1+y^2}$. Find

$$\frac{\partial^2 H}{\partial x^2} =$$

$$\frac{\partial^2 H}{\partial x \partial y} =$$

2. Sketch the graphs of functions that have the following properties:

(a) $f' > 0$, but $f'' < 0$

(b) $f(1) = 0$, $f''(x) > 0$

2. Sketch the graph of the solution to $y' = \frac{(1-x)(2-x)}{1+y^4}$, $y(1) = 2$
for $0 \leq x \leq 3$.