Math101, Quiz # 5

Name: **ID #:**

1. If $\frac{e^y}{\cos x} = \sin x \ln y$, then $\left.\frac{dy}{dx}\right|_{(x,y)=(\frac{\pi}{4},\frac{\pi}{4})} =$

2. Suppose that $f(2) = -3, g(2) = 4, f'(2) = -2,$ and $g'(2) = 7.$ Find $\left.\frac{d}{dx}\left(\frac{2g(x)}{1+f(x)}\right)\right|_{x=2}$.

3. If $u = e^{y^2}$ and $x = 2u^2,$ then $\left.\frac{dy}{dx}\right|_{(x,y)=(2,0)} =$