Math 132 **Fall 2017**
Group Quiz 4 **9/27/17** **Name (Print):** Solutions.

Find the derivative of the following functions.

1. $f(x) = x^{4/3}$

$$f'(x) = \frac{4}{3}x^{\frac{1}{3}}$$

2. $g(x) = \frac{\sin x}{x^2+1}$

$$g' = \frac{(x^2+1)\cos x - 2x\sin x}{(x^2+1)^2}$$

3. $h(x) = (x^2 + \frac{1}{x})\tan x$

$$h' = (2x + \frac{-1}{x^2})\tan x + (x^2 + \frac{1}{x})\sec^2 x.$$

4. $p(x) = \sqrt{x}\csc x$

$$p' = \frac{1}{2}x^{-\frac{1}{2}}\csc x + x^{\frac{1}{2}}(-\csc x \cot x)$$

5. $q(x) = \frac{\sin x}{x+\cos x}$

$$q' = \frac{(x+\cos x)\cos x - \sin x(1-\sin x)}{(x+\cos x)^2}$$