

Math 201**Section 2.4** The Product and Quotient Rules

The Product Rule If f and g are both differentiable, then

$$\frac{d}{dx}[f(x)g(x)] = f(x)g'(x) + g(x)f'(x)$$

The Quotient Rule If f and g are differentiable, then

$$\frac{d}{dx} \left[\frac{f(x)}{g(x)} \right] = \frac{g(x)f'(x) - f(x)g'(x)}{[g(x)]^2}$$

ie,

$$\frac{d}{dx} \left[\frac{\text{hi}}{\text{lo}} \right] = \frac{\text{lo dhi} - \text{hi dlo}}{\text{lolo}}$$