$\frac{d}{dx} f[g(x)]^n = n \cdot f[g(x)]^{n-1} \cdot f'[g(x)] \cdot g'(x)$ ← Chain rule

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

$\frac{d}{dx} [\frac{f(x)}{g(x)}] = \frac{f'(x) \cdot g(x) - g'(x) \cdot f(x)}{[g(x)]^2}$ ← Quotient rule

$\frac{d}{dx} [g(x)]^n = n[g(x)]^{n-1} \cdot g'(x)$ ← Power rule

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$\frac{d}{dx} b^{f(x)} = b^{f(x)} \cdot ln(b) \cdot f'(x)$

$\frac{d}{dx} log_a[f(x)] = \frac{f'(x)}{f(x) \cdot ln(a)}$

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

$\frac{d}{dx} [trig(f(x))^n] = n \cdot trig(f(x))^{n-1} \cdot trig'(f(x)) \cdot f'(x)$

$\frac{d}{dx} [sin(f(x))] = f'(x) \cdot cos(f(x))$

$\frac{d}{dx} [cos(f(x))] = f'(x) \cdot -sin(f(x))$

$\frac{d}{dx} [tan(f(x))] = f'(x) \cdot sec^2(f(x))$

$\frac{d}{dx} [csc(f(x))] = f'(x) \cdot cot(f(x)) \cdot -csc(f(x))$

$\frac{d}{dx} [sec(f(x))] = f'(x) \cdot sec(f(x)) \cdot tan(f(x))$

$\frac{d}{dx} [cot(f(x))] = f'(x) \cdot -csc^2(f(x))$