

Definition of a Derivative: $f'(x) =$

DIFFERENTIATION FORMULAS:

$$\frac{d}{dx} au =$$

$$\frac{d}{dx}(u + v) =$$

$$\frac{d}{dx} u^n =$$

$$\frac{d}{dx} a =$$

$$\frac{d}{dx}(uv) =$$

$$\frac{d}{dx}\left(\frac{u}{v}\right) =$$

CHAIN RULE: $\frac{d}{dx}[f(g(x))]$

$$\frac{d}{dx} \sin u =$$

$$\frac{d}{dx} \cos u =$$

$$\frac{d}{dx} \tan u =$$

$$\frac{d}{dx} \cot u =$$

$$\frac{d}{dx} \sec u =$$

$$\frac{d}{dx} \csc u =$$

$$\frac{d}{dx} \ln u =$$

$$\frac{d}{dx} e^u =$$

$$\frac{d}{dx} a^u =$$

$$\frac{d}{dx} \sin^{-1} u =$$

$$\frac{d}{dx} \cos^{-1} u =$$

$$\frac{d}{dx} \tan^{-1} u =$$

$$\frac{d}{dx} \cot^{-1} u =$$

$$\frac{d}{dx} \sec^{-1} u =$$

$$\frac{d}{dx} \csc^{-1} u =$$