Review of
section 3.1 - 3.4

$$\frac{d}{dx} x^n = \qquad\qquad\qquad \frac{d}{dx} e^x =$$

$$\frac{d}{dx} \left(f(x) \cdot g(x) \right) =$$

$$\frac{d}{dx} \frac{f(x)}{g(x)} =$$

$$\frac{d}{dx} \frac{1}{g(x)} =$$

$$\boxed{\text{Section } 3.3}$$

Special Limits

$$\lim_{x \to 0} \frac{\sin x}{x} \qquad \lim_{x \to 0} \frac{\cos x - 1}{x} \qquad \lim_{x \to 0} \frac{1 - \cos x}{x^2}$$

Ex: $\lim_{x \to \infty} \dfrac{1 - \cos 2x}{\sin x \cdot \tan x}$

Derivatives of Trigonometric Functions

$(\sin x)' =$

$(\tan x)' =$

$(\cot x)' =$

$(\cos x)' =$

$(\sec x)' =$

$(\csc x)' =$

Ex: $\dfrac{d}{dx} (\sin x \cdot \cos x)$

$\dfrac{d}{dx} (\tan^2 x)$

$$\boxed{\text{Section 3.4 The Chain Rule}}$$

$$\boxed{\frac{d}{dx} f(g(x)) = f'(g(x)) \cdot g'(x)}$$

$$\frac{d}{dx} (f(x))^n =$$

Ex: $\dfrac{d}{dx} (\sec^n x \ \tan^m x) =$