

Derivative Rule**Antiderivative Rule**

$$\frac{d}{dx} \sin x = \cos x$$

$$\int \cos x \, dx = \sin x + C$$

$$\frac{d}{dx} \cos x = -\sin x$$

$$\int \sin x \, dx = -\cos x + C$$

$$\frac{d}{dx} \tan x = \sec^2 x$$

$$\int \sec^2 x \, dx = \tan x + C$$

$$\frac{d}{dx} \cotan x = -\operatorname{cosec}^2 x$$

$$\int \operatorname{cosec}^2 x \, dx = -\cotan x + C$$

$$\frac{d}{dx} \sec x = \sec x \tan x$$

$$\int (\sec x \tan x) \, dx = \sec x + C$$

$$\frac{d}{dx} \operatorname{cosec} x = -\operatorname{cosec} x \cotan x$$

$$\int (\operatorname{cosec} x \cotan x) \, dx = -\operatorname{cosec} x + C$$