Derivative Review Scavenger Hunt

Chain Rule

$$\frac{d}{dx}\left(\sqrt{x^2-7x}\right)$$

$$y' = 6\cos(2x+3)\sin^2(2x+3)$$

$$\frac{d}{dx}\left[\tan\left(x^2\right)+\tan^2 x\right]$$

$$\frac{dy}{dx}=\frac{2x-7}{2\sqrt{x^2-7x}}$$

$$\frac{d}{dx}\left[\frac{1}{\left(x^2-2x-5\right)^4}\right]$$

$$\frac{dy}{dx}=2x\sec^2(x^2)+2\tan x\sec^2 x$$

$$\frac{d}{dx}\left[\cos(\tan x)\right]$$

$$\frac{dy}{dx} = \frac{-8x+8}{\left(x^2-2x-5\right)^5}$$

$$\frac{d}{dx}\left(x-\frac{1}{x}\right)^{\frac{3}{2}}$$

$$\frac{dy}{dx}=-\sin\left(\tan x\right)\sec^2 x$$

$$\frac{d}{dx}\left(\sin^3 x + \cos^3 x\right)$$

$$\frac{dy}{dx} = \frac{3}{2}\left(x - \frac{1}{x}\right)^{\frac{1}{2}}\left(1 + \frac{1}{x^2}\right)$$

$$\frac{d}{dx}\left(\frac{x-6}{x+7}\right)^3$$

$$\frac{dy}{dx} = 3\sin^2 x\cos x - 3\cos^2 \sin x$$

$$\frac{d}{dx}\left(\sin^2 \cos(4x)\right)$$

$$\frac{dy}{dx} = 3\left(\frac{x-6}{x+7}\right)^2\left(\frac{13}{(x+7)^2}\right)$$

$$\frac{d}{dx}\left[\frac{1}{\sqrt[5]{2x-1}}\right]$$

$$\frac{dy}{dx} = -8\sin(\cos(4x))\cos(\cos 4x)\sin(4x)$$

$$\frac{d}{dx}\left(\frac{\sin^2 x}{\cos x}\right)$$

$$\frac{dy}{dx} = \frac{2}{5\sqrt[5]{(2x-4)^6}}$$

$$\frac{d}{dx}\left(\sin^3(2x+3)\right)$$

$$\frac{dy}{dx} = \frac{2\cos^2 x \sin x + \sin^2 x}{\cos^2 x}$$