Now let's make things a bit more complicated...

Remember ALL of the rules!

$$f(x)=\sqrt{x^2-\sqrt{3x+\sqrt{x^4+9}}}$$

$f(x)=\left[x^2-\left[3x+(x^4+9)^{1/2}\right]^{1/2}\right]^{1/2}$ $\left(\frac{1}{2}\cdot\frac{-2}{2}\right)$

$f'(x)=\frac{1}{2}\left[x^2-\left[3x+(x^4+9)^{1/2}\right]^{1/2}\right]^{-1/2}\left[2x-\frac{1}{2}\left[3x+(x^4+9)^{1/2}\right]^{-1/2}\cdot\left[3+\frac{1}{2}(x^4+9)^{-1/2}(4x^3)\right]\right]$

$$f(x)=\frac{(x^3-5)^4\sqrt{9-x^2}}{\frac{9}{x^3}\left(5x^7+x^{-3}\right)^{-2}}$$

$(5x^7+x^{-3})^2(9x^{-3})^{-1}$

$9x^{-3}$

$f'(x)=\left[4(x^3-5)^3(3x^2)(9-x^2)^{1/2}+(x^3-5)^4\left[\frac{1}{2}(9-x^2)^{-1/2}(-2x)\right]\right]\cdot\left[9x^{-3}(5x^7+x^{-3})^{-2}\right]-\left[(x^3-5)^4\sqrt{9-x^2}\right]\left[(-27x^{-4})(5x^7+x^{-3})^{-2}+9x^{-3}\left[-2(5x^7+x^{-3})^{-3}(35x^6-3x^{-4})\right]\right]$

$$\left[\frac{9}{x^3}\left(5x^7+x^{-3}\right)^{-2}\right]^2$$

$$y = \sqrt[3]{x^3 + \sqrt{6x-3}}$$

$$y = \left[x^3 + (6x-3)^{1/2}\right]^{1/3}$$

$$y' = \frac{1}{3}\left[x^3 + (6x-3)^{1/2}\right]^{-2/3}\left[3x^2 + \frac{1}{2}(6x-3)^{-1/2}(6)\right]$$

$$(B \circ B)^n$$

$$n(B \circ B)^{n-1}(B \circ B')$$

$$f(x)=\sqrt[4]{\frac{\left(x^5-1\right)^{-2}+3x^7}{x\sqrt{3x-5}}}$$

$$f'(x)=\frac{1}{4}\left[\frac{(x^5-1)^{-2}+3x^7}{x(3x-5)^{1/2}}\right]^{-3/4}\left[\frac{\left[-2(x^5-1)^{-3}(5x^4)+21x^6\right]\cdot x(3x-5)^{1/2}-\left[(x^5-1)^{-2}+3x^7\right]\left[(1)(3x-5)^{1/2}+x\left[\frac{1}{2}(3x-5)^{-1/2}(3)\right]\right]}{(x\sqrt{3x-5})^2}\right]$$

$$y=\left(x^4+5x\sqrt{x+\sqrt[3]{x^3+8}}\right)^4$$