

Power Rule

Stephen Styles

October 1, 2019

Chain Rule:

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

1. Find the derivative of $f(x) = (5x^2 + 3x - 1)^{1/2}$

2. Find the derivative of $f(x) = (3x^2 + 1)^5$

3. Find the derivative of $f(x) = e^{x^2-x+2}$

4. Find the derivative of $f(x) = \sin(\cos(x))$

5. Find the derivative of $f(x) = \ln(x^2 + 1)$

6. Find the derivative of $f(x) = e^{\sin(x^2)}$

7. Find the derivative of $f(x) = \tan(\csc(e^{3x+1}))$