

Chain Rule WS 6

1) Find $f'(x)$ if $f(x) = 8\sqrt{(x^4 - 4x^2)}$

2) Find $f'(x)$ if $f(x) = \sqrt[4]{\frac{(2x-5)}{(5x+2)}}$

3) Find $f'(x)$ if $f(x) = \frac{4x^8 - \sqrt{x}}{8x^4}$

4) Find $f'(x)$ if $f(x) = \left(x + \frac{1}{x}\right)\left(x^2 - \frac{1}{x^2}\right)$

5) Find $f'(x)$ @ $x=2$ if $f(x) = \frac{(x+4)(x-8)}{(x+6)(x-6)}$

6) Find $f'(x)$ @ $x=1$ if $f(x) = \left[\frac{x - \sqrt{x}}{x + \sqrt{x}}\right]^2$

7) Find $f'(x)$ @ $x=1$ if $f(x) = \frac{x}{(1+x^2)^2}$

8) Find $f'(x)$ if $f(x) = \tan(\log(\ln x^2))$

9) Find $\frac{dy}{dx}$ if $y = u^2 - 1$ and $u = \frac{1}{x-1}$

10) Find $\frac{dy}{dt}$ if $y = (x^6 - 6x^5)(5x^2 + x)$ and $x = \sqrt{t}$.