

Chain Rule Practice Worksheet with Answers

1) $f(x) = (2x + 1)^2$

5) $f(x) = \cos(2x)$

2) $f(x) = (5x - 7)^6$

6) $f(x) = \cos(\sin(x))$

3) $f(x) = e^{5x}$

7) $f(x) = \sin(x^2)$

4) $f(x) = \frac{1}{2}e^{2x}$

8) $f(x) = \tan(4x)$

$$9) f(x) = \ln(3x + 1)$$

$$13) f(x) = \sqrt{4x^2 + 1}$$

$$10) f(x) = \sqrt{x}$$

$$14) f(x) = e^{2x^3+5x}$$

$$11) f(x) = \sqrt{3x^2 + 3}$$

$$15) f(x) = \sin(4x^2 + 1)^2$$

$$12) f(x) = (3x^2 + 2x)^3$$

$$16) f(x) = \tan(3x^2 - 5x)$$

$$17) f(x) = \cotan(e^x + x^2)$$

$$20) f(x) = \sqrt{5x^2 - 2x + 4}$$

$$18) f(x) = \ln\left(\frac{1}{x}\right)$$

$$21) f(x) = \sin(2x^8 + 4x^2 + 3x)$$

$$19) f(x) = (2x - \frac{1}{2})^{-\frac{1}{2}}$$

$$22) 5^{4x+2} :) \text{ check the rules}$$