

Derivative Practice - power, product, quotient, chain

Name _____

Use the power, product, quotient, and chain rules to find the derivative of the following functions. Simplify your answers!

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

2) $f(x) = \frac{1}{5\sqrt{x}}$

3) $f(x) = -\frac{x}{3}$

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

5) $f(x) = \frac{2}{3x^4}$

6) $f(x) = \frac{4x^3}{5}$

$$7) f(x) = 2\sqrt{x^2 - 3}$$

$$8) f(x) = \left(\frac{8x^2 - 3}{x} \right)^4$$

$$9) f(x) = 2x(3x^3 + 5)^4$$