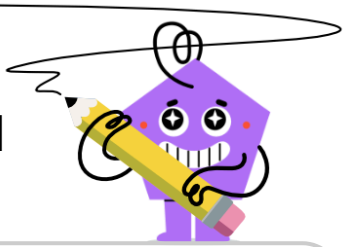
Name



Derivative Rules - General Exponential Exponent Binomial to Derivative

1

Find the derivative f'(x) using the general exponential rule and the chain rule. $f(x) = 3 \cdot 7^{2x^4-2x}$

A $f'(x) = 3 \cdot 7^{2x^4-2x} \cdot (8x^3-2)$

B $f'(x) = 3 \cdot 7^{2x^4-2x} \ln 7 \cdot (8x^3-2)$

C $f'(x) = 3 \cdot 7^{2x^4-2x} \ln 7$

D $f'(x) = 3 \cdot 7^{2x^4-2x} \ln 7 \cdot (2x^4-2x)$

2

Find the derivative f'(x) using the general exponential rule and the chain rule. $f(x) = 2 \cdot 3^{3x^3-3x^2}$

A $f'(x) = 2 \cdot 3^{3x^3-3x^2} \cdot (9x^2-6x)$

B $f'(x) = 2 \cdot 3^{3x^3-3x^2} \ln 3$

C $f'(x) = 2 \cdot 3^{3x^3-3x^2} \ln 3 \cdot (9x^2-6x)$

D $f'(x) = 2 \cdot 3^{3x^3-3x^2} \ln 3 \cdot (3x^3-3x^2)$

3

Find the derivative f'(x) using the general exponential rule and the chain rule. $f(x) = 4 \cdot 3^{x^3-3x}$

A $f'(x) = 4 \cdot 3^{x^3-3x} \ln 3 \cdot (3x^2-3)$

B $f'(x) = 4 \cdot 3^{x^3-3x} \ln 3$

C $f'(x) = 4 \cdot 3^{x^3-3x} \ln 3 \cdot (x^3-3x)$

D $f'(x) = 4 \cdot 3^{x^3-3x} \cdot (3x^2-3)$

4

Find the derivative f'(x) using the general exponential rule and the chain rule. $f(x) = 4 \cdot 9^{3x^4-x^2}$

A $f'(x) = 4 \cdot 9^{3x^4-x^2} \ln 9 \cdot (12x^3-2x)$

B $f'(x) = 4 \cdot 9^{3x^4-x^2} \cdot (12x^3-2x)$

C $f'(x) = 4 \cdot 9^{3x^4-x^2} \ln 9$

D $f'(x) = 4 \cdot 9^{3x^4-x^2} \ln 9 \cdot (3x^4-x^2)$

5

Find the derivative f'(x) using the general exponential rule and the chain rule. $f(x) = 3^{3x^3-2x}$

A $f'(x) = 3^{3x^3-2x} \ln 3 \cdot (9x^2-2)$

B $f'(x) = 3^{3x^3-2x} \ln 3$

C $f'(x) = 3^{3x^3-2x} \ln 3 \cdot (3x^3-2x)$

D $f'(x) = 3^{3x^3-2x} \cdot (9x^2-2)$

6

Find the derivative f'(x) using the general exponential rule and the chain rule. $f(x) = 7^{2x^3-2x^2}$

A $f'(x) = 7^{2x^3-2x^2} \ln 7 \cdot (2x^3-2x^2)$

B $f'(x) = 7^{2x^3-2x^2} \ln 7$

C $f'(x) = 7^{2x^3-2x^2} \cdot (6x^2-4x)$

D $f'(x) = 7^{2x^3-2x^2} \ln 7 \cdot (6x^2-4x)$

7

Find the derivative f'(x) using the general exponential rule and the chain rule. $f(x) = 5 \cdot 2^{3x^3-3x}$

A $f'(x) = 5 \cdot 2^{3x^3-3x} \ln 2 \cdot (9x^2-3)$

B $f'(x) = 5 \cdot 2^{3x^3-3x} \ln 2 \cdot (3x^3-3x)$

C $f'(x) = 5 \cdot 2^{3x^3-3x} \cdot (9x^2-3)$

D $f'(x) = 5 \cdot 2^{3x^3-3x} \ln 2$

8

Find the derivative f'(x) using the general exponential rule and the chain rule. $f(x) = 4 \cdot 6^{2x^4-2x}$

A $f'(x) = 4 \cdot 6^{2x^4-2x} \ln 6 \cdot (8x^3-2)$

B $f'(x) = 4 \cdot 6^{2x^4-2x} \ln 6$

C $f'(x) = 4 \cdot 6^{2x^4-2x} \ln 6 \cdot (2x^4-2x)$

D $f'(x) = 4 \cdot 6^{2x^4-2x} \cdot (8x^3-2)$