



Derivative Rules - General Exponential

Simple Exponent to Derivative

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

A $f'(x) = 2 \cdot 4^x \ln 4$ B $f'(x) = 2 \cdot 4^x \ln 4 \cdot (x)$

C $f'(x) = 2 \cdot 4^x$ D $f'(x) = 2(x) \cdot 4^{x-1}$

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

A $f'(x) = 3 \cdot 2^x$ B $f'(x) = 3 \cdot 2^x \ln 2$

C $f'(x) = 3 \cdot 2^x \ln 2 \cdot (x)$ D $f'(x) = 3(x) \cdot 2^{x-1}$

3 Find the derivative $f'(x)$ using the general exponential rule and the chain rule. $f(x) = 4 \cdot 5^x$

A $f'(x) = 4 \cdot 5^x$ B $f'(x) = 4 \cdot 5^x \ln 5$

C $f'(x) = 4 \cdot 5^x \ln 5 \cdot (x)$ D $f'(x) = 4(x) \cdot 5^{x-1}$

4 Find the derivative $f'(x)$ using the general exponential rule and the chain rule. $f(x) = 2^x$

A $f'(x) = 2^x$ B $f'(x) = 2^x \ln 2 \cdot (x)$

C $f'(x) = (x) \cdot 2^{x-1}$ D $f'(x) = 2^x \ln 2$

5 Find the derivative $f'(x)$ using the general exponential rule and the chain rule. $f(x) = 4 \cdot 8^x$

A $f'(x) = 4 \cdot 8^x \ln 8$ B $f'(x) = 4(x) \cdot 8^{x-1}$

C $f'(x) = 4 \cdot 8^x$ D $f'(x) = 4 \cdot 8^x \ln 8 \cdot (x)$

6 Find the derivative $f'(x)$ using the general exponential rule and the chain rule. $f(x) = 3 \cdot 6^x$

A $f'(x) = 3 \cdot 6^x \ln 6 \cdot (x)$ B $f'(x) = 3 \cdot 6^x \ln 6$

C $f'(x) = 3 \cdot 6^x$ D $f'(x) = 3(x) \cdot 6^{x-1}$

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

A $f'(x) = 3 \cdot 5^x \ln 5 \cdot (x)$ B $f'(x) = 3 \cdot 5^x \ln 5$

C $f'(x) = 3 \cdot 5^x$ D $f'(x) = 3(x) \cdot 5^{x-1}$

8 Find the derivative $f'(x)$ using the general exponential rule and the chain rule. $f(x) = 2 \cdot 8^x$

A $f'(x) = 2 \cdot 8^x \ln 8 \cdot (x)$ B $f'(x) = 2 \cdot 8^x$

C $f'(x) = 2 \cdot 8^x \ln 8$ D $f'(x) = 2(x) \cdot 8^{x-1}$