



Derivative Rules - Multi Product Natural and General Exponential to Derivative

1 Find the derivative $f'(x)$ using the product, natural exponential, and general exponential rules.

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

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

C $f'(x) = (5e^x)(3^x \ln 3)$ D $f'(x) = (5e^x)(3^x) - (5e^x)(3^x \ln 3)$

2 Find the derivative $f'(x)$ using the product, natural exponential, and general exponential rules.

$$f(x) = (2e^x)(4 \cdot 8^x)$$

A $f'(x) = (2e^x)(4 \cdot 8^x) - (2e^x)(4 \cdot 8^x \ln 8)$ B $f'(x) = (2e^x)(4 \cdot 8^x)$

C $f'(x) = (2e^x)(4 \cdot 8^x \ln 8)$ D $f'(x) = (2e^x)(4 \cdot 8^x) + (2e^x)(4 \cdot 8^x \ln 8)$

3 Find the derivative $f'(x)$ using the product, natural exponential, and general exponential rules.

$$f(x) = (5e^x)(2 \cdot 8^x)$$

A $f'(x) = (5e^x)(2 \cdot 8^x \ln 8)$ B $f'(x) = (5e^x)(2 \cdot 8^x) + (5e^x)(2 \cdot 8^x \ln 8)$

C $f'(x) = (5e^x)(2 \cdot 8^x) - (5e^x)(2 \cdot 8^x \ln 8)$ D $f'(x) = (5e^x)(2 \cdot 8^x)$

4 Find the derivative $f'(x)$ using the product, natural exponential, and general exponential rules.

$$f(x) = (2e^x)(2 \cdot 9^x)$$

A $f'(x) = (2e^x)(2 \cdot 9^x) + (2e^x)(2 \cdot 9^x \ln 9)$ B $f'(x) = (2e^x)(2 \cdot 9^x)$

C $f'(x) = (2e^x)(2 \cdot 9^x \ln 9)$ D $f'(x) = (2e^x)(2 \cdot 9^x) - (2e^x)(2 \cdot 9^x \ln 9)$

5 Find the derivative $f'(x)$ using the product, natural exponential, and general exponential rules.

$$f(x) = (2e^x)(4 \cdot 7^x)$$

A $f'(x) = (2e^x)(4 \cdot 7^x) - (2e^x)(4 \cdot 7^x \ln 7)$ B $f'(x) = (2e^x)(4 \cdot 7^x)$

C $f'(x) = (2e^x)(4 \cdot 7^x \ln 7)$ D $f'(x) = (2e^x)(4 \cdot 7^x) + (2e^x)(4 \cdot 7^x \ln 7)$

6 Find the derivative $f'(x)$ using the product, natural exponential, and general exponential rules.

$$f(x) = (3e^x)(5 \cdot 6^x)$$

A $f'(x) = (3e^x)(5 \cdot 6^x \ln 6)$ B $f'(x) = (3e^x)(5 \cdot 6^x) + (3e^x)(5 \cdot 6^x \ln 6)$

C $f'(x) = (3e^x)(5 \cdot 6^x) - (3e^x)(5 \cdot 6^x \ln 6)$ D $f'(x) = (3e^x)(5 \cdot 6^x)$

7 Find the derivative $f'(x)$ using the product, natural exponential, and general exponential rules. $f(x) = (e^x)(2^x)$

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

C $f'(x) = (e^x)(2^x)$ D $f'(x) = (e^x)(2^x) - (e^x)(2^x \ln 2)$

8 Find the derivative $f'(x)$ using the product, natural exponential, and general exponential rules.

$$f(x) = (5e^x)(2 \cdot 5^x)$$

A $f'(x) = (5e^x)(2 \cdot 5^x \ln 5)$ B $f'(x) = (5e^x)(2 \cdot 5^x) + (5e^x)(2 \cdot 5^x \ln 5)$

C $f'(x) = (5e^x)(2 \cdot 5^x) - (5e^x)(2 \cdot 5^x \ln 5)$ D $f'(x) = (5e^x)(2 \cdot 5^x)$