



Derivative Rules - Multi Product Natural Exponential Trigonometric to Derivative

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

$$f(x) = (4e^x)(4 \cos(x))$$

A $f'(x) = (4e^x)(4 \cos(x)) + (4e^x)(-4 \sin(x))$ B $f'(x) = (4e^x)(-4 \sin(x))$

C $f'(x) = (4e^x)(4 \cos(x)) - (4e^x)(-4 \sin(x))$ D $f'(x) = (4e^x)(4 \cos(x))$

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

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

A $f'(x) = (5e^x)(-3 \sin(x))$ B $f'(x) = (5e^x)(3 \cos(x))$

C $f'(x) = (5e^x)(3 \cos(x)) + (5e^x)(-3 \sin(x))$ D $f'(x) = (5e^x)(3 \cos(x)) - (5e^x)(-3 \sin(x))$

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

$$f(x) = (3e^x)(\sin(x))$$

A $f'(x) = (3e^x)(\cos(x))$ B $f'(x) = (3e^x)(\sin(x)) - (3e^x)(\cos(x))$

C $f'(x) = (3e^x)(\sin(x))$ D $f'(x) = (3e^x)(\sin(x)) + (3e^x)(\cos(x))$

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

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

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

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

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

$$f(x) = (e^x)(2 \cos(x))$$

A $f'(x) = (e^x)(2 \cos(x))$ B $f'(x) = (e^x)(-2 \sin(x))$

C $f'(x) = (e^x)(2 \cos(x)) + (e^x)(-2 \sin(x))$ D $f'(x) = (e^x)(2 \cos(x)) - (e^x)(-2 \sin(x))$

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

$$f(x) = (5e^x)(5 \cos(x))$$

A $f'(x) = (5e^x)(5 \cos(x))$ B $f'(x) = (5e^x)(-5 \sin(x))$

C $f'(x) = (5e^x)(5 \cos(x)) - (5e^x)(-5 \sin(x))$ D $f'(x) = (5e^x)(5 \cos(x)) + (5e^x)(-5 \sin(x))$

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

$$f(x) = (e^x)(\cos(x))$$

A $f'(x) = (e^x)(\cos(x)) - (e^x)(-\sin(x))$ B $f'(x) = (e^x)(\cos(x))$

C $f'(x) = (e^x)(\cos(x)) + (e^x)(-\sin(x))$ D $f'(x) = (e^x)(-\sin(x))$

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

$$f(x) = (4e^x)(\sin(x))$$

A $f'(x) = (4e^x)(\sin(x))$ B $f'(x) = (4e^x)(\sin(x)) - (4e^x)(\cos(x))$

C $f'(x) = (4e^x)(\sin(x)) + (4e^x)(\cos(x))$ D $f'(x) = (4e^x)(\cos(x))$