



Derivative Rules - Multi Quotient Natural Exponential Trigonometric to Derivative

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

$$f(x) = \frac{5e^x}{5 \sin(x)}$$

$$f'(x) = \frac{(5e^x)(5 \sin(x)) - (5e^x)(5 \cos(x))}{(5 \sin(x))^2}$$

$$f'(x) = \frac{(5e^x)(5 \sin(x)) + (5e^x)(5 \cos(x))}{(5 \sin(x))^2}$$

$$f'(x) = \frac{(5e^x)(5 \sin(x)) - (5e^x)(5 \cos(x))}{(5 \sin(x))^2}$$

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

$$f(x) = \frac{e^x}{5 \sin(x)}$$

$$f'(x) = \frac{(e^x)(5 \sin(x)) - (e^x)(5 \cos(x))}{(5 \sin(x))^2}$$

$$f'(x) = \frac{(e^x)(5 \sin(x)) + (e^x)(5 \cos(x))}{(5 \sin(x))^2}$$

$$f'(x) = \frac{(e^x)(5 \sin(x)) - (e^x)(5 \cos(x))}{(5 \sin(x))^2}$$

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

$$f(x) = \frac{2e^x}{2 \sin(x)}$$

$$f'(x) = \frac{(2e^x)(2 \sin(x)) - (2e^x)(2 \cos(x))}{(2 \sin(x))^2}$$

$$f'(x) = \frac{(2e^x)(2 \cos(x)) - (2e^x)(2 \sin(x))}{(2 \sin(x))^2}$$

$$f'(x) = \frac{(2e^x)(2 \sin(x)) - (2e^x)(2 \cos(x))}{(2 \sin(x))^2}$$

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

$$f(x) = \frac{e^x}{2 \sin(x)}$$

$$f'(x) = \frac{(e^x)(2 \sin(x)) - (e^x)(2 \cos(x))}{(2 \sin(x))^2}$$

$$f'(x) = \frac{(e^x)(2 \sin(x)) + (e^x)(2 \cos(x))}{(2 \sin(x))^2}$$

$$f'(x) = \frac{(e^x)(2 \sin(x)) - (e^x)(2 \cos(x))}{(2 \sin(x))^2}$$

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

$$f(x) = \frac{4e^x}{\cos(x)}$$

$$f'(x) = \frac{(4e^x)(-\sin(x)) - (4e^x)(\cos(x))}{(\cos(x))^2}$$

$$f'(x) = \frac{(4e^x)(\cos(x)) - (4e^x)(-\sin(x))}{(\cos(x))^2}$$

$$f'(x) = \frac{(4e^x)(\cos(x)) - (4e^x)(-\sin(x))}{(\cos(x))^2}$$

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

$$f(x) = \frac{5e^x}{2 \sin(x)}$$

$$f'(x) = \frac{(5e^x)(2 \sin(x)) - (5e^x)(2 \cos(x))}{(2 \sin(x))^2}$$

$$f'(x) = \frac{(5e^x)(2 \sin(x)) - (5e^x)(2 \cos(x))}{(2 \sin(x))^2}$$

$$f'(x) = \frac{(5e^x)(2 \sin(x)) - (5e^x)(2 \cos(x))}{(2 \sin(x))^2}$$

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

$$f(x) = \frac{5e^x}{4 \sin(x)}$$

$$f'(x) = \frac{(5e^x)(4 \sin(x)) - (5e^x)(4 \cos(x))}{(4 \sin(x))^2}$$

$$f'(x) = \frac{(5e^x)(4 \sin(x)) - (5e^x)(4 \cos(x))}{(4 \sin(x))^2}$$

$$f'(x) = \frac{(5e^x)(4 \sin(x)) + (5e^x)(4 \cos(x))}{(4 \sin(x))^2}$$

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

$$f(x) = \frac{4e^x}{2 \cos(x)}$$

$$f'(x) = \frac{(4e^x)(2 \cos(x)) + (4e^x)(-2 \sin(x))}{(2 \cos(x))^2}$$

$$f'(x) = \frac{(4e^x)(-2 \sin(x)) - (4e^x)(2 \cos(x))}{(2 \cos(x))^2}$$

$$f'(x) = \frac{(4e^x)(2 \cos(x)) - (4e^x)(-2 \sin(x))}{(2 \cos(x))^2}$$