Name

# Derivative Rules - Multi Trigonometric Natural and General Exponential (with Rule) to Derivative

**1**

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

$\frac{d}{dx}\cos(x) = -\sin(x)$

$f(x) = 2\cos(x) + 5e^x + 4 \cdot 7^x$

A $f'(x) = 2\cos(x) + 5e^x + 4 \cdot 7^x$

B $f'(x) = -2\sin(x) + 5e^x + 4 \cdot 7^x$

C $f'(x) = -2\sin(x) + 5e^x + 4 \cdot 7^x \ln 7$

D $f'(x) = 2\sin(x) + 5e^x + 4 \cdot 7^x \ln 7$

**2**

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

$\frac{d}{dx}e^x = e^x$

$f(x) = 2\cos(x) + 2e^x + 4 \cdot 3^x$

A $f'(x) = -2\sin(x) + 2e^x + 4 \cdot 3^x \ln 3$

B $f'(x) = 2\cos(x) + 2e^x + 4 \cdot 3^x$

C $f'(x) = -2\sin(x) + 2e^x + 4 \cdot 3^x$

D $f'(x) = 2\sin(x) + 2e^x + 4 \cdot 3^x \ln 3$

**3**

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

$\frac{d}{dx}e^x = e^x$

$f(x) = \sin(x) + e^x + 2 \cdot 6^x$

A $f'(x) = \sin(x) + e^x + 2 \cdot 6^x$

B $f'(x) = -\cos(x) + e^x + 2 \cdot 6^x \ln 6$

C $f'(x) = \cos(x) + e^x + 2 \cdot 6^x$

D $f'(x) = \cos(x) + e^x + 2 \cdot 6^x \ln 6$

**4**

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

$\frac{d}{dx}\sin(x) = \cos(x)$

$f(x) = 3\sin(x) + 4e^x + 3 \cdot 6^x$

A $f'(x) = 3\sin(x) + 4e^x + 3 \cdot 6^x$

B $f'(x) = 3\cos(x) + 4e^x + 3 \cdot 6^x$

C $f'(x) = -3\cos(x) + 4e^x + 3 \cdot 6^x \ln 6$

D $f'(x) = 3\cos(x) + 4e^x + 3 \cdot 6^x \ln 6$

**5**

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

$\frac{d}{dx}e^x = e^x$

$f(x) = 4\sin(x) + 3e^x + 4 \cdot 3^x$

A $f'(x) = -4\cos(x) + 3e^x + 4 \cdot 3^x \ln 3$

B $f'(x) = 4\sin(x) + 3e^x + 4 \cdot 3^x$

C $f'(x) = 4\cos(x) + 3e^x + 4 \cdot 3^x$

D $f'(x) = 4\cos(x) + 3e^x + 4 \cdot 3^x \ln 3$

**6**

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

$\frac{d}{dx}\cos(x) = -\sin(x)$

$f(x) = 4\cos(x) + 3e^x + 5 \cdot 4^x$

A $f'(x) = 4\sin(x) + 3e^x + 5 \cdot 4^x \ln 4$

B $f'(x) = 4\cos(x) + 3e^x + 5 \cdot 4^x$

C $f'(x) = -4\sin(x) + 3e^x + 5 \cdot 4^x$

D $f'(x) = -4\sin(x) + 3e^x + 5 \cdot 4^x \ln 4$

**7**

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

$\frac{d}{dx}a^x = a^x \ln a$

$f(x) = 3\sin(x) + 3e^x + 2 \cdot 3^x$

A $f'(x) = 3\sin(x) + 3e^x + 2 \cdot 3^x$

B $f'(x) = -3\cos(x) + 3e^x + 2 \cdot 3^x \ln 3$

C $f'(x) = 3\cos(x) + 3e^x + 2 \cdot 3^x \ln 3$

D $f'(x) = 3\cos(x) + 3e^x + 2 \cdot 3^x$

**8**

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

$\frac{d}{dx}a^x = a^x \ln a$

$f(x) = 5\sin(x) + 5e^x + 3 \cdot 4^x$

A $f'(x) = 5\cos(x) + 5e^x + 3 \cdot 4^x$

B $f'(x) = 5\sin(x) + 5e^x + 3 \cdot 4^x$

C $f'(x) = -5\cos(x) + 5e^x + 3 \cdot 4^x \ln 4$

D $f'(x) = 5\cos(x) + 5e^x + 3 \cdot 4^x \ln 4$