



Derivative Rules - General Exponential

Simple Exponent (with Rule) to Derivative

<p>1</p> <p>Find the derivative $f'(x)$ using the general exponential rule and the chain rule.</p> $\frac{d}{dx} a^u = a^u \ln a \cdot \frac{du}{dx}$ $f(x) = 3 \cdot 5^x$	<p>2</p> <p>Find the derivative $f'(x)$ using the general exponential rule and the chain rule.</p> $\frac{d}{dx} a^u = a^u \ln a \cdot \frac{du}{dx}$ $f(x) = 2 \cdot 7^x$
<p>A $f'(x) = 3(x) \cdot 5^{x-1}$</p> <p>B $f'(x) = 3 \cdot 5^x \ln 5$</p>	<p>A $f'(x) = 2 \cdot 7^x$</p> <p>B $f'(x) = 2 \cdot 7^x \ln 7 \cdot (x)$</p>
<p>C $f'(x) = 3 \cdot 5^x$</p> <p>D $f'(x) = 3 \cdot 5^x \ln 5 \cdot (x)$</p>	<p>C $f'(x) = 2 \cdot 7^x \ln 7$</p> <p>D $f'(x) = 2(x) \cdot 7^{x-1}$</p>
<p>3</p> <p>Find the derivative $f'(x)$ using the general exponential rule and the chain rule.</p> $\frac{d}{dx} a^u = a^u \ln a \cdot \frac{du}{dx}$ $f(x) = 5 \cdot 9^x$	<p>4</p> <p>Find the derivative $f'(x)$ using the general exponential rule and the chain rule.</p> $\frac{d}{dx} a^u = a^u \ln a \cdot \frac{du}{dx}$ $f(x) = 7^x$
<p>A $f'(x) = 5 \cdot 9^x$</p> <p>B $f'(x) = 5(x) \cdot 9^{x-1}$</p>	<p>A $f'(x) = 7^x \ln 7 \cdot (x)$</p> <p>B $f'(x) = (x) \cdot 7^{x-1}$</p>
<p>C $f'(x) = 5 \cdot 9^x \ln 9$</p> <p>D $f'(x) = 5 \cdot 9^x \ln 9 \cdot (x)$</p>	<p>C $f'(x) = 7^x$</p> <p>D $f'(x) = 7^x \ln 7$</p>
<p>5</p> <p>Find the derivative $f'(x)$ using the general exponential rule and the chain rule.</p> $\frac{d}{dx} a^u = a^u \ln a \cdot \frac{du}{dx}$ $f(x) = 3^x$	<p>6</p> <p>Find the derivative $f'(x)$ using the general exponential rule and the chain rule.</p> $\frac{d}{dx} a^u = a^u \ln a \cdot \frac{du}{dx}$ $f(x) = 4 \cdot 5^x$
<p>A $f'(x) = 3^x \ln 3 \cdot (x)$</p> <p>B $f'(x) = 3^x \ln 3$</p>	<p>A $f'(x) = 4 \cdot 5^x \ln 5$</p> <p>B $f'(x) = 4(x) \cdot 5^{x-1}$</p>
<p>C $f'(x) = (x) \cdot 3^{x-1}$</p> <p>D $f'(x) = 3^x$</p>	<p>C $f'(x) = 4 \cdot 5^x$</p> <p>D $f'(x) = 4 \cdot 5^x \ln 5 \cdot (x)$</p>
<p>7</p> <p>Find the derivative $f'(x)$ using the general exponential rule and the chain rule.</p> $\frac{d}{dx} a^u = a^u \ln a \cdot \frac{du}{dx}$ $f(x) = 5^x$	<p>8</p> <p>Find the derivative $f'(x)$ using the general exponential rule and the chain rule.</p> $\frac{d}{dx} a^u = a^u \ln a \cdot \frac{du}{dx}$ $f(x) = 3 \cdot 9^x$
<p>A $f'(x) = 5^x$</p> <p>B $f'(x) = (x) \cdot 5^{x-1}$</p>	<p>A $f'(x) = 3 \cdot 9^x$</p> <p>B $f'(x) = 3 \cdot 9^x \ln 9 \cdot (x)$</p>
<p>C $f'(x) = 5^x \ln 5$</p> <p>D $f'(x) = 5^x \ln 5 \cdot (x)$</p>	<p>C $f'(x) = 3(x) \cdot 9^{x-1}$</p> <p>D $f'(x) = 3 \cdot 9^x \ln 9$</p>