

Derivative Laws Practice

Using the laws of derivatives, compute the following derivatives.

1. Find the derivative of

$$f(x) = x^c e^x,$$

for c a real number.

2. Find the derivative of

$$g(x) = \frac{e^x}{x^4}.$$

3. Find the second derivative of

$$\ell(x) = x^c,$$

for c a real number

4. Find the derivative of

$$k(x) = a^x b^x,$$

where a, b are positive numbers.