

Example: Compute the derivative of $f(x) = 3(\sqrt[3]{x} + 3x)^8$

Example: Compute the derivative of $h(x) = 15 \ln(3e^x + x^3)$

Example: Compute the derivative of $g(x) = \frac{45}{3 \ln x + 3^x} + e$

Example: Compute the derivative of $f(x) = \frac{3}{(4x^5 - \sqrt[3]{x^4})^4} + x^5$

Example: Compute the derivative of $h(x) = 2e^{\sqrt[5]{x} + 3e^x} + \ln x$

Exercise Compute the derivative of the following functions

1. $f(x) = \frac{e}{(4x^2 - \sqrt[3]{x^2})^2}$

2. $f(x) = \ln(5x^4 + 5x) + e^{2x}$

3. $f(x) = \sqrt[3]{e^x + 3 \ln x + e}$