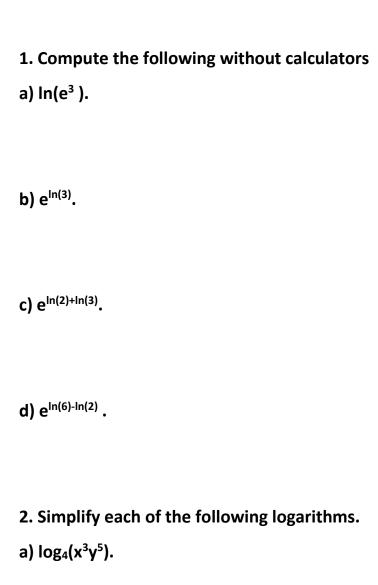
Lab Worksheet for September 9, 2021

Practice with Derivatives of Logs Using the Chain Rule.



b) $\log(x^9/y^5)$.

Find the derivative of the following functions (1-16).

1.
$$f(x) = In(x)$$
.

2.
$$h(x) = 7^x$$
.

3.
$$g(x) = e^x$$
.

4.
$$f(x) = In(5x)$$
.

5.
$$g(x) = ln(x^3)$$
.

6.
$$f(x) = e^{4x}$$
.

7.
$$g(x) = 3e^{x/3}$$
.

8.
$$h(x) = log(x)$$
.

9.
$$f(x) = 3ln(x) + x^2 - 5$$

10.g(x) =
$$x^3 - e^{2x} + \ln(2x)$$

11.
$$h(x) = e^{3x+2} - 4x^2 + 25$$

12.
$$f(x) = \sin(\cos(e^x))$$
.

13.
$$g(x) = e^{x+3(x)^2}$$
.

14.
$$h(x) = cos(3x) + log_3(x)$$
.

15.
$$f(x) = e^{\sin(x) + \cos(x)}$$
.

16.
$$g(x) = 5^x + (3x^2 - \cos(x))^3$$
.

17. A Cessna plane takes off from an airport at sea level and its altitude (in feet) at time t (in minutes) is given by h = 2000 ln (t + 1). Find the rate of climb at time t = 3 min.