Quiz 5.5 – Derivatives and Antiderivatives of Exponentials and Logarithms

1. (1 pt) alfredLibrary/AUCI/chapter5/lesson5/quiz/logderivs1pet.pg

Practice differentiating logarithmic functions:

(a) If $y = \ln(x)$, then $y' =$ _____.

(b) If $g(x) = \log_3(x)$, then $g'(x) =$ _____.

(c) If $f(x) = \ln(x^2 - 10)$, then $f'(x) =$ _____.

2. (1 pt) alfredLibrary/AUCI/chapter5/lesson5/quiz/expderivs1pet.pg

Practice differentiating exponential functions:

(a) If $y = e^x$, then $\frac{dy}{dx} =$ _____.

(b) If $y = 8^x$, then $\frac{dy}{dx} =$ _____.

(c) If $y = 1000 \cdot 1.03^x$, then $\frac{dy}{dx} =$ _____.

(d) If $y = e^{3x^2}$, then $\frac{dy}{dx} =$ _____.

(e) If $y = 4^{3x^2}$, then $\frac{dy}{dx} =$ _____.

3. (1 pt) alfredLibrary/AUCI/chapter5/lesson5/quiz/expintegrals1pet.pg

Practice integrating exponential functions:

(a) $\int e^x dx =$ _____

(b) $\int 6^x dx =$ _____

(c) $\int 3 \cdot 4^x dx =$ _____

4. (1 pt) alfredLibrary/AUCI/chapter5/lesson5/quiz/problem33pet.pg

$$\int \left(7 + \frac{4}{T} + \frac{10}{T^2}\right) dT = \_\_\_\_\_$$