

6. (6 points) Use the properties of logarithms to write the following expression as a single logarithm:

$$\log x - 2 \log y + \frac{2}{3} \log z$$

$$\log \left(\frac{x \cdot z^{\frac{2}{3}}}{y^2} \right)$$

7. (10 points) Suppose you invest \$2000 in a money market fund that pays 1.15% compounded continuously.

a. Write a formula for the value of your investment after t years.

$$f(t) = P_0 \cdot e^{rt}$$

$$f(t) = 2000 \cdot e^{0.0115t}$$

0.0115

b. Determine the effective interest rate for this account. What does the effective interest rate tell you?

$$f(t) = P_0 \cdot e^{ert}$$

The effective interest rate for this account

is 1.15, the value after (1) year (t)

would be 6319.6385

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