

Name _____

Homework 20

Section 4.4

1. (2) Write the following exponential expressions as an equivalent logarithmic expression.

a) $10^m = 356$

b) $7^q = \frac{V}{3}$

2. (2) Write the following logarithmic expressions as an equivalent exponential expression.

a) $\log_c(2r) = T$

b) $\ln 85 = K^2$

3. (4) Expand the logarithm $\log_2\left(\frac{5R^3}{PQ}\right)$ completely.

4. (4) Write the expression $\log_5 x - 2\log_5 y + \log_5 z$ in the form $\log_b P$.

5. (3ea) Use $\log_b 2 = A$, $\log_b 3 = B$, $\log_b 5 = C$ and the properties of logs to evaluate the following expressions.

(a) $\log_b 15$

(b) $\log_b 16$

(c) b^{A+C}