

Chapter 4 Review - NO Calculator

Date _____

Period _____

Rewrite each equation in exponential form. Do Not Solve.

1) $\log_{12} 144 = 2$

2) $\log_2 4 = 2$

3) $\log_y x = -1$

4) $\log_r q = p$

Rewrite each equation in logarithmic form. Do Not Solve.

5) $b^a = 16$

6) $2^5 = 32$

7) $12^2 = 144$

8) $10^7 = a$

Expand each logarithm.

9) $\log_7 (xy^2)^6$

10) $\log_6 \frac{2^4}{3^5}$

11) $\log_3 \frac{a^2}{b^6}$

12) $\log_4 (z^3 \sqrt{x})$

Condense each expression to a single logarithm.

13) $2\log_9 u - 5\log_9 v$

14) $25\log_6 a + 5\log_6 b$

15) $6\log_7 6 + 5\log_7 5$

16) $15\log_2 x - 5\log_2 y$

Evaluate each expression.

17) $\log_5 \frac{1}{125}$

18) $\log_4 \frac{1}{16}$

19) $\log_5 25$

20) $\log_2 16$