

Quiz

Date _____ Period _____

Rewrite each equation in exponential form.

1) $\log_7 343 = 3$

2) $\log_4 16 = 2$

3) $\log_2 16 = 4$

4) $\log_{19} \frac{1}{19} = -1$

Rewrite each equation in logarithmic form.

5) $9^2 = 81$

6) $2^2 = 4$

7) $196^{\frac{1}{2}} = 14$

8) $8^2 = 64$

Expand each logarithm.

9) $\log_2 (z^6 \sqrt[3]{x})$

10) $\log_8 \frac{a^2}{b}$

11) $\ln (xy^3)^3$

12) $\log_5 (xyz^4)$

Condense each expression to a single logarithm.

13) $2\log_5 z + \frac{1}{3} \cdot \log_5 x$

14) $\log_3 z + \frac{1}{2} \cdot \log_3 x + \frac{1}{2} \cdot \log_3 y$

15) $12\log_4 x - 3\log_4 y$

16) $10\log u - 5\log v$

Evaluate each expression.

17) $\log_{49} 7$

18) $\log_4 \frac{1}{64}$

19) $\log_2 2.7$

20) $\log_3 6.26$