

8.1 Intro to Logs

CA #2

Name: _____

DIRECTIONS: Rewrite each exponential function as a logarithmic function.

1) $2^8 = 256$

2) $3^{-5} = \frac{1}{243}$

3) $216^{\frac{1}{3}} = 6$

Rewrite each log as an exponential.

4) $\log_5 625 = 4$

5) $\log_{100} 10 = \frac{1}{2}$

6) $\log_{\frac{1}{7}} 343 = -3$

Find the following logs by rewriting exponentially or explain why they don't make sense.

7) $\log_3 729$

8) $\log_{\frac{1}{4}} 256$

9) $\log 100,000$

If $f(x) = \log_5 x$, find the following.

10) $f(125)$

11) $f\left(\frac{1}{3125}\right)$

12) $f(\sqrt{125})$

Use your calculator to find the following logs to the nearest thousandth.

13) $\log_{19} 876$

14) $\log_{12} 345$

15) $\ln 908$

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Corrective Assignment Answers

1) $\log_2 256 = 8$ 2) $\log_3 \frac{1}{243} = -5$ 3) $\log_{216} 6 = \frac{1}{3}$ 4) $5^4 = 625$ 5) $100^{\frac{1}{2}} = 10$ 6) $\frac{1}{7}^{-3} = 343$

7) $x = 6$ 8) $x = -4$ 9) $x = 5$ 10) $x = 3$ 11) $x = -5$ 12) $x = \frac{3}{2}$ 13) 2.301 14) 2.352 15) 6.811