

Defining and Evaluating Logarithms

Write the following in logarithmic form.

1. $5^3 = 125$

2. $3^3 = 81$

3. $10^5 = 100000$

4. $e^4 = 54.6$

Write the following in exponential form.

5. $\log_6 1296 = 4$

6. $\log_5 125 = y$

7. $\ln 5 = 1.6$

8. $\log 10000 = 4$

9. *If $f(x) = \log_3 x$, find $f(81)$ and $f(27)$*

10. *If $f(x) = \log_4 x$, find $f(16)$ and $f(64)$*

Find the exact value of the following:

11. $\log_2 8 =$

12. $\log_5 625 =$