11-6

Practice

Natural Logarithms

Evaluate each expression.

1. ln 71

2. ln 8.76

3. ln 0.532

4. antiln −0.256

5. antiln 4.62

6. antiln −1.62

Convert each logarithm to a natural logarithm and evaluate.

7. $\log_7 94$

8. $\log_5 256$

9. $\log_9 0.712$

Use natural logarithms to solve each equation or inequality.

10. $6^x = 42$

11. $7^x = 4^{x+3}$

12. $1249 = 175e^{-0.04t}$

13. $10^{x+1} > 3^x$

14. $12 < e^{0.048y}$

15. $8.4 < e^{t-2}$

16. ***Banking*** Ms. Cubbatz invested a sum of money in a certificate of deposit that earns 8% interest compounded continuously. The formula for calculating interest that is compounded continuously is $A = Pe^{rt}$. If Ms. Cubbatz made the investment on January 1, 1995, and the account was worth $12,000 on January 1, 1999, what was the original amount in the account?