

9-5 Skills Practice**Base e and Natural Logarithms**

Use a calculator to evaluate each expression to four decimal places.

1. e^3

2. e^{-2}

3. $\ln 2$

4. $\ln 0.09$

Write an equivalent exponential or logarithmic equation.

5. $e^x = 3$

6. $e^4 = 8x$

7. $\ln 15 = x$

8. $\ln x \approx 0.6931$

Evaluate each expression.

9. $e^{\ln 3}$

10. $e^{\ln 2x}$

11. $\ln e^{-2.5}$

12. $\ln e^y$

Solve each equation or inequality.

13. $e^x \geq 5$

14. $e^x < 3.2$

15. $2e^x - 1 = 11$

16. $5e^x + 3 = 18$

17. $e^{3x} = 30$

18. $e^{-4x} > 10$

19. $e^{5x} + 4 > 34$

20. $1 - 2e^{2x} = -19$

21. $\ln 3x = 2$

22. $\ln 8x = 3$

23. $\ln(x - 2) = 2$

24. $\ln(x + 3) = 1$

25. $\ln(x + 3) = 4$

26. $\ln x + \ln 2x = 2$