

Key

Evaluate:

1. $e^{\ln y}$

y

2. $\ln e^{-4x}$

 $-4x$

3. $\ln e^{45}$

45

Solve each equation.

4. $3e^x + 1 = 10$

 $x = 1.10$

5. $\ln 3x = 5$

 $x = 49.471$

6. $2e^x - 16 = 0$

 $x = 2.079$

7. $\ln(x + 1) = 9$

 $x = 8102.084$

8. $-3e^{4x} + 11 = 2$

 $x = -0.275$

9. $\ln x + \ln 3x = 12$

 $x = 232.92$

10. $\ln(x^2 + 12) = \ln x + \ln 8$

 $x = 6$ $x = 2$

11. $8 + 3e^{3x} = 26$

 $x = 0.60$

12. $\ln x + \ln(x + 4) = \ln 5$

 $x = \frac{1}{5}$ $x = 1$

13. If you deposit \$150 in a savings account paying 4% interest compounded continuously, how much money will you have after 5 years? How long would it take you to double your money?

↓
\$183.21

↓
 $t \approx 17.329$ years

14. If you deposit \$100 in an account paying 3.5% interest compounded continuously, how much money will you have after 8 years? How long will it take for you to have \$250 in the account?

↓
\$132.31

↓
 $t \approx 26.18$ years.