

Logarithmic Equations**Different Bases**

1. $\log_2(x) + \log_2(x - 3) = 2$

2. $\ln(x + 1) - \ln(x) = 2$

3. $\log_3(x) - \log_3(x - 2) = 1$

4. $\log_2(x^2 - 6x) = 3 + \log_2(1 - x)$

5. $\log_{10}(x) + \log_{10}(x - 3) = 1$

6. $\log_2(x) + \log_2(x - 2) = 3$

7. $\log_3(x) - \log_3(x - 1) = 2$

8. $\log_4(x) + \log_4(x - 6) = 2$

9. $\log_2(x + 3) + \log_2(x - 3) = 4$

10. $\ln(x + 2) - \ln(x + 1) = 1$

Answers**Logarithmic Equations****Different Bases**

1. $x = 4$

2. $x = \frac{1}{e^2 - 1}$

3. $x = 3$

4. $x = -4$

5. $x = 5$

6. $x = 4$

7. $x = \frac{9}{8}$

8. $x = 8$

9. $x = 5$

10. $x = \frac{e - 2}{1 - e}$