

3 Exercises

1. $2^x = 16$

2. $3^x = 81$

3. $4^x = 256$

4. $5^x = 625$

5. $10^x = 1000$

6. $e^x = 20$

7. $2^{2x-1} = 8$

8. $9^{2x+1} = 729$

9. $5^{3x-2} = 125$

10. $6^{x+2} = 216$

11. $7^{3x} = 343$

12. $8^{x-1} = 4$

13. $11^x = 121$

14. $12^x = 144$

15. $15^x = 225$

4 Logarithmic Equations

Solve the following logarithmic equations:

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

2. $\log_3(x + 2) = 2$

3. $\log_4(x + 3) = 1$

4. $\log_5(x + 4) = 2$

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

6. $\log_2(x - 1) = 4$

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

8. $\log_4(x - 3) = 2$

9. $\log_5(x - 4) = 1$

$$10. \log_{10}(x - 5) = 0$$

$$11. \ln(x + 1) = 2$$

$$12. \ln(x - 1) = 1$$

$$13. \log_2(x + 1) + \log_2(x - 1) = 4$$

$$14. \log_3(x + 2) - \log_3(x - 2) = 2$$

$$15. \ln(x + 3) - \ln(x - 3) = 1$$