

Section 6-3 : Solving Exponential Equations

Solve each of the following equations.

1. $11^{4+x} = 11^{7-10x}$

2. $3^{4x} = 3^{7x}$

3. $2^{1-x} = 2^{2-3x}$

4. $9^{x^2} = 9^{12-4x}$

5. $6^{x^2-3x} = 6^{20+5x}$

6. $6^{1+x} = \frac{1}{36^{4x+2}}$

7. $9^x = 27^{2+x}$

8. $8^{4x+1} = 1$

9. $3 = 14^{9-2x}$

10. $6^{2+x} = 8^{8+2x}$

11. $13^{5+7x} = 2^{3-x}$

12. $10^{7x} = 3$

13. $16 = 10^{2+3x}$

14. $6 = e^{4+9x}$

15. $9 - e^{6x} = 0$

16. $e^{x^2-2} = 4$

