

Exponential Equations – unlike bases

1. $7^x = 5$

2. $3^{x+1} = 8$

3. $11^{3x} = 5^x$

4. $16^{x+1} = 26^{3x-5}$

5. $5^x = (4.6)^{4x+3}$

6. $216^x = 75(6^x)$

7. $11^{x^2-4x} = 16$

8. $1.04^x = 2$

9. $54.8^{-x} = 12.3^{x-2}$

10. $46^{4x-1} = 28(11^{3x})$

11. $100(1.05)^x = 125^{2x-1}$

12. $\frac{(1.03)^x - 1}{0.03} = 7$

13. $3^x = 18.4$

14. $12.4^x = 127$

15. $(13.5)^{2-5x} = (1.07)^{4x+3}$

16. $(26)^{x^2+2x} = 703$

17. $\sqrt{5^{3x}} = 3 \cdot \sqrt[3]{2^x}$

18. $\frac{6^{3x+1}}{5^x} = 342$

19. $\frac{5^{3x+1}}{11} = \frac{3^{2x+5}}{13^x}$

20. $\sqrt[3]{2^{x+1}} \cdot \sqrt{5^x} = \sqrt[4]{7^{3x-2}}$