

**Solving Equations**  
Emphasis solving Exponential Equations

Solve each of the following Exponential Equations:

1. $5^{3-2x} = 5^{-x}$	2. $3^{2a} = 3^{-a}$
3. $4^{2p} = 4^{-2p-1}$	4. $6^{-2x} = 6^{2-3x}$
5. $8^{x-1} = 2^{x+2}$	6. $144^{2x+1} = 12^{5x-1}$
7. $5^{3x+1} = 25^{x+1}$	8. $4^{-x+1} = 2^{2x}$
9. $64^a = 8^{a+2}$	10. $2^{m+1} = 16^{m+7}$

11. $36^{2x} = 216^{x-1}$	12. $3^{a-7} = 27^{2a}$
13. $\left(\frac{1}{3}\right)^{x+2} = 3^{x-1}$	14. $\left(\frac{1}{2}\right)^x = 2^{x+3}$
15. $8^{x-1} = 2^{x+2}$	16. $8^{5x} = 16^{3x+4}$
17. $81^{2x+1} = 9^{5x-1}$	18. $16^{x+1} = 4^{4x+1}$
19. $4^{x+2} = 64$	20. $3^{x-2} = 81$