6.4 Day 4-Exponential Equations HW Name _____

Solve each equation, showing all steps!

1. $12^{2x+3} = 12^{5x-6}$	2. $5^{5x+1} = 25$
3. $6^{9x-3} = 216^{x}$	4. $7^{2x} \cdot 7^{4x-3} = 7^{7x-8}$
5. $8^{4x} \cdot 8^{x+3} = 64$	6. $\left(7^{2x-5}\right)^{3} = 7^{4x+5}$
7. $\left(\frac{4}{5}\right)^{x+6}\left(\frac{4}{5}\right)^{2x-1} = \left(\frac{4}{5}\right)^{9x}$	8. $2^{x-6} = 8^{x}$