



Name _____ Date _____ Period _____

EXPONENTIAL EQUATIONS & INEQUALITIES WORKSHEET

1. $5^{3x+7} = 25^{x-4}$ 2. $36^{7x+1} = 216^{3x-2}$ 3. $\frac{1}{16}^{3x+5} = \frac{1}{64}^{x+4}$

4. $81^{3-x} = \frac{1}{3}^{5x-6}$ 5. $7^{3x+4} < 49^{2x+1}$ 6. $16^{2x-5} \geq 64^{2x-3}$

7. $27^{5x-11} \geq 9^{3x+15}$ 8. $8^{x-1} \leq \frac{1}{2}^{2x-1}$ 9. $25^{3x-1} \leq 125^{3x+5}$

10. $\frac{1}{6}^{2x-10} \leq \frac{1}{36}^{3x+13}$ 11. $12^{x-4} > 144^{x-6}$ 12. $16^{x+1} \geq 4^{4x+1}$

13. Write an exponential function for the graph that passes through (0, 6.4) and (3, 100).

14. Find the balance of an account after 7 years if \$700 is deposited into an account paying 4.3% interest compounded monthly.