

Honors Algebra II  
Exponential Equations (Like Bases) Worksheet 1

Name: \_\_\_\_\_

Solve each equation:

1. $5^x = 5^{-3}$	2. $6^x = 216$
3. $7^y = \frac{1}{49}$	4. $10^x = .001$
5. $2^{2x} = \frac{1}{8}$	6. $\left(\frac{1}{5}\right)^{x-3} = 125$
7. $3^y = 3^{3y+1}$	8. $5^{3y+4} = 5^y$
9. $3^x = 9^{x+1}$	10. $2^5 = 2^{2x-1}$
11. $8^{x-1} = 16^{3x}$	12. $2^{x+3} = \frac{1}{16}$

Answers: 1) -3 2) 3 3) -2 4) -3 5) -3/2 6) 0 7) -1/2 8) -2 9) -2 10) 3 11) -1/3 12) -7