

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

Date: \_\_\_\_\_ Class: \_\_\_\_\_

### Solving Exponential Equations Assignment

**Directions:** Solve each equation using a common base.

1.  $9^{3x-7} = 9^{5-x}$

2.  $2^{w+4} \cdot 2^{4w+6} = 2^{2w+1}$

3.  $8^{6y+4} = 64$

4.  $\frac{1}{5} = 5^{2c+3}$

5.  $\frac{1}{27} = 3^{4m-1}$

6.  $216 = 6^{2r-11}$

7.  $2^{3k-1} \cdot 2^{5k-7} = 16$

8.  $4^n \cdot 4^{2n-9} = 64$