

Name: _____

HW # _____

Simplify the expression by writing as a single power to a positive exponent. You do not need to evaluate.

1. $\frac{9^{12}}{9^3}$

2. $\frac{6^7}{6^{11}}$

3. $\frac{y^7}{y}$

4. $\frac{30x^7}{5x^3}$

5. $6^4 \cdot 6^{-6}$

6. $x^5 \cdot x^6$

7. $m^4 \cdot m$

12. $\frac{11^{-4} \cdot 11^{15}}{11^6}$

13. y^{-12}

14. $\frac{15^{-4}}{15^{-6}}$

15. $3^4 \cdot 3 \cdot 3^{-2}$

16. $(-3a^3)(2a^5)$

Simplify each expression completely. Evaluate any numbers raised to a power.

17. 125^0

18. $\frac{(-5)^3 \cdot (-5)^5}{(-5)^7}$