

Alg 1 Honors Homework – **Properties of Exponents** Name: _____

Simplify.

1. $4^2 \cdot 4^3$

2. $x^3 \cdot x^5 \cdot x$

3. $[(a + 2)^3]^3$

4. $[(-3)^5]^2$

5. $(13 \cdot 28)^2$

6. $(6xy^5)^4$

7. $\frac{(-3)^8}{(-3)^2}$

8. $(\frac{6}{2})^3$

9. $\frac{2x^4 \cdot x^2}{x^4}$

$$10. (4b^2)^4 \cdot b^7$$

$$11. (a^2bc^4)^5 (-a^4b^3c)^2$$

$$12. \frac{2^3m^9n^{12}}{3^3m^3n^3}$$

$$13. \left(\frac{x^2}{y}\right)^2 \cdot y^4$$

$$14. \left(\frac{3w}{x}\right)^4 \cdot \left(\frac{x^3}{3}\right)^2$$