

Exponents WS

Name _____ A# _____

Simplify each expression below using the laws of exponents. The "Expanded Form" space is available for those who wish to it, but not required. Your final answers should not include any negative exponents.

1. $(2x)^2 \cdot 3x^4$	2. $\frac{x^{-3}}{x^{-4}}$	3. $\frac{18x^{-5}y^4}{12x^{-3}y^{-3}}$
4. $y^3 \cdot y \cdot y^4$	5. $7x^3xy \cdot 5xy^9$	6. $(x^5)^5$
7. $(m^{-8})^3$	8. $(2ab)^5$	9. $x^2 \cdot (x^5)^{-3}$
10. $\frac{52x^4}{16x^8}$	11. $\frac{x^2}{x^3 \cdot 4x}$	12. $\left(\frac{3x^4}{y^6}\right)^2$
13. $(8m)^0$	14. $5m^{-3}n^4$	15. $\left(\frac{x^2y^{-3}}{x^{-3}y^5}\right)^{-8}$
16. $\frac{x^3y}{xy^5} \cdot \frac{x^2y^9}{x^8y^4}$	17. $\left(\frac{12x^{-7}}{3xy^4}\right)^3$	18. $(5x^2y^2)^2 \cdot 2xy^2$