Name: _____ Date: _____

Assignment

Evaluate the following expressions. Final answers should have all positive **integer** exponents, and radicals should be in lowest terms. Show all your work.

a. $\left(\frac{9}{12a}\right)^3$ b. $(3xy)^4$ c. $(m^2n^5)^3$ d. $(-2ab)(-4m^3n^2)$

e. $\left(\frac{c^5}{d^3}\right)^{-4}$ f. $(c^3d^4)^{-5}$ g. $(2xy^{-4})^5$ h. $(-3a^{-4}b^{-5})^{-3}$

i. $\frac{x^9y^5}{x^6y^{-2}}$ j. $\frac{(a^{-2}b^{-1})^{-3}}{a^3b}$ k. $\frac{a^4}{a^5} \times a^{-6}$ l. $\frac{6x^4y^{-3}}{14xy^2}$

m. $(25a^4b^2)^{3/2}$ n. $(x^3y^{-3/2})(x^{-1}y^{1/2})$ o. $\frac{12x^{-5}y^{5/2}}{3x^{1/2}y^{-1/2}}$ p. $\left(\frac{50x^2y^4}{2x^4y^7}\right)^{1/2}$

q. $\left(\frac{-5m^4n^{-5}}{15n^2p^6}\right)^{-4}$ r. $\left(\frac{-4m^3n^{-6}}{12n^3p^4}\right)^{-3}$ s. $-\left(\frac{12a^4b^{-6}}{27a^{-2}c^6}\right)^{-1/2}$ t. $\left(\frac{-12a^6b^{-6}}{20a^{-3}c^4}\right)^{-4/3}$