

Name: _____

Date: _____

Learning Goal 2.3

I can evaluate an expression using order of operations with powers and applying exponent laws.

Variable**Example** Simplify the following expressions. Show all your work.

a. $y^7 \times y^{12}$ b. $\frac{q^{78}}{q^{42}}$ c. $\frac{a^{23}}{b^{17}}$ d. $(x^{13})^4$

Example Simplify the following expressions. Show all your work.

e. $\left(\frac{3}{4a}\right)^3$ f. $(3xy)^4$ g. $(m^2n^5)^3$ h. $(-2ab)(-4m^3n^2)$

i. $\left(\frac{c^5}{d^3}\right)^{-4}$ j. $(c^3d^4)^{-5}$ k. $(2xy^{-4})^5$ l. $(-3a^{-4}b^{-5})^{-3}$

m. $\frac{x^9y^5}{x^6y^{-2}}$ n. $\frac{a^4}{a^5} \times a^{-6}$

Simplify vs Evaluate