

Name: _____

Date: _____

Learning Goal 5.3

Apply order of operations to radical expressions.

Simplify, leaving numbers as radicals in lowest terms. Do not evaluate. Remember your order of operations!

a. $(25a^4b^2)^{3/2}$

b. $(x^3y^{-3/2})(x^{-1}y^{1/2})$

c. $\frac{12x^{-5}y^{5/2}}{3x^{1/2}y^{-1/2}}$

d. $\left(\frac{50x^2y^4}{2x^4y^7}\right)^{1/2}$

e. $(s^{-1}t^{1/3})(s^4t^3)$

f. $\left(\frac{4c^{1/3}}{d^3}\right)^{-3}$

g. $\left(\frac{2x^{-4}y^{-3}}{4x^2y^{-5}}\right)^{-4}$

h. $\left(\frac{x^6z^{-1/3}}{-125y^{-9}z^{8/3}}\right)^{-1/3}$