## Order of Operations With Variables, Powers and Exponent Laws

Powers and Exponent Laws

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Learning Goal 2.3	I can evaluate an expression using order of operations with
	powers and applying exponent laws.

## Variable

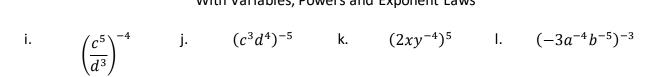
**Example** Simplify the following expressions. Show all your work.

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.  $(-2ab)(-4m^3n^2)$ 

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m.

 $\frac{x^9y^5}{x^6y^{-2}}$ 



 $\frac{a^4}{a^5} \times a^{-6}$ 

Simplify vs Evaluate