

Chapter 8: Apply Exponent Properties Study Guide

8.1: Apply Exponent Properties Involving Products:

$$\text{Ex: } (-18m^2n)^2 \left(-\frac{1}{6}mn^2 \right)$$

$$\text{Ex: } -3(2x)^4(4x^5y)^2$$

$$\text{Ex: } (25a^2b)^3 \left(\frac{1}{5}abc \right)^2$$

$$\text{Ex: } (-4xy)^3(-2x^2)^3$$

8.2: Apply Exponent Properties Involving Quotients:

$$\text{Ex: } \left(\frac{3x^7}{2y^{12}} \right)^4$$

$$\text{Ex: } \left(-\frac{6}{x} \right)^3 \left(\frac{x^4}{3y^7} \right)^5$$

$$\text{Ex: } \frac{3y^{20}}{5} \left(\frac{10x^7}{9y^8} \right)^2$$

$$\text{Ex: } \frac{1}{4x^5} \left(\frac{2x^2}{y^3} \right)^5$$

8.3: Zero and Negative Exponents:

$$\mathbf{Ex:} \left(\frac{-16p^5q^2}{2p^3q^3} \right)^0$$

$$\mathbf{Ex:} \frac{48x^6y^7z^5}{-6xy^5z^6}$$

$$\mathbf{Ex:} \frac{(-2mn^2)^{-3}}{4m^{-6}n^4}$$

$$\mathbf{Ex:} \left(\frac{2x^3y^2z}{3x^4yz^{-2}} \right)^{-2}$$