

Lesson 3: Multiplying And Dividing Monomials

1) MULTIPLYING

- * multiplying coefficients
- * multiplying the variables

example: Simplify

$$\begin{aligned} \text{a) } & (-2x^3y^2z)(5x^2y^5) \\ & = (-2)(5)x^3x^2y^2y^5z \\ & = -10x^5y^7z \end{aligned}$$

2) DIVIDING

- * Divide or reduce coefficients
- * Divide the variables

examples: Simplify

$$\begin{aligned} \text{a) } & -6y^5z^2 \div -3y^2z \\ & = 2y^3z \end{aligned}$$

$$\text{b) } \frac{5x^4y^2z^2}{15x^3z}$$

$$= \frac{1xy^2z}{3}$$

$$= \frac{xy^2z}{3}$$

$$\text{c) } \frac{-15x^6}{3x^2y^4}$$

$$= \frac{-5x^4}{y^4}$$

