



## Practice Run

Simplify the following using the *Exponent Rules*.

1.  $(a^3 b^2)(a^2 b^4)$

2.  $\frac{x^5 y^3}{x^2 y^2}$

3.  $(q^{-3})(q^5)$

4.  $c^2 \div c^{-3}$

5.  $\frac{x^{-2} y}{x^{-4} y^{-2}}$



Compare your answers.

Simplify the following using the *Exponent Rules*:

$$\begin{aligned} 1. \quad & (a^3b^2)(a^2b^4) \\ &= a^{3+2}b^{2+4} \\ &= a^5b^6 \end{aligned}$$

$$\begin{aligned} 2. \quad & \frac{x^5y^3}{x^2y^2} \\ &= x^{5-2}y^{3-2} \\ &= x^3y \end{aligned}$$

$$\begin{aligned} 3. \quad & (q^{-3})(q^5) \\ &= q^{-3+5} \\ &= q^2 \end{aligned}$$

$$\begin{aligned} 4. \quad & c^2 \div c^{-3} \\ &= c^{2-(-3)} \\ &= c^5 \end{aligned}$$

$$\begin{aligned} 5. \quad & \frac{x^{-2}y}{x^{-4}y^{-2}} \\ &= x^{-2-(-4)}y^{1-(-2)} \\ &= x^2y^3 \end{aligned}$$