

$$(x^3)(x^5)(x^{-2})$$

$$3 + 5 + (-2) = 8 + (-2) = 6$$

$$\begin{array}{l} x^1 \cdot x^3 \cdot x^5 \cdot x^{-2} \\ 1 + 3 + 5 + (-2) \\ 4 + 5 + (-2) \\ 9 + (-2) \\ 7 \\ x^7 \end{array} \qquad \begin{array}{l} (x^5)^{-2} \\ x^{(5)(-2)} \\ x^{-10} \\ \frac{1}{x^{10}} \end{array}$$

$$\frac{x^m}{x^n} = x^{m-n} \quad \text{top exponent} - \text{bottom exponent}$$

$$\frac{3^{6\leftarrow}}{3^{2\leftarrow}} = 3^{6-2} = 3^4$$

$$\frac{x^4}{x^6} = x^{4-6} = x^{-2} = \frac{1}{x^2}$$

$$\begin{aligned} \frac{p^3 m^2}{p^4 m'} &= \frac{p^3}{p^4} \cdot \frac{m^2}{m'} = p^{3-4} m^{2-1} \\ &= p^{-1} m' \\ &= \frac{m}{p} \end{aligned}$$

$$\frac{k_j^7 \cdot 4}{k_j^{-2}} = k_j^{7-1} \cdot 4+1a$$
$$= k_j^{6 \cdot 6}$$

① Multiplying powers with like bases  
+ exponents

② Raising a power to a power  
\* exponents

③ Dividing powers with like bases  
top exp. - bottom exp.

④ Raising a quotient to a power

$$\left(\frac{a}{b}\right)^n = \frac{a^n}{b^n} \quad \text{apply the exponent to the entire numerator and denominator}$$

$$\left(\frac{b^7}{c^{-3}}\right)^2 = \frac{b^{14}}{c^{-6}} = b^{14} c^6$$