

Negative & Zero Indices (A)

$$a^{-m} = \frac{1}{a^m}$$

$$\left(\frac{a}{b}\right)^{-m} = \left(\frac{b}{a}\right)^m = \frac{b^m}{a^m}$$

$$a^0 = 1$$

$$\text{Simplify } \frac{2x^{-3}y^2}{4x^{-1}y} = \frac{x^{-3}y^2}{2x^{-1}y} = \frac{xy^2}{2x^3y} = \frac{y}{2x^2}$$

$$\text{Note that } \frac{a^{-2}}{b^{-3}} = \frac{b^3}{a^2}$$

$$\text{Simplify } x^0 = 1$$

$$\text{Simplify } \frac{x^4}{x^5} = \frac{\cancel{x}\cancel{x}\cancel{x}\cancel{x}^1}{x\cancel{x}\cancel{x}\cancel{x}\cancel{x}} = \frac{1}{x}$$