

$$\begin{array}{r} 3x^2 + x - 5 \\ | \\ 3x^2 + 1x^1 - 5x^0 \end{array}$$

## Simplifying Polynomials

Each of them always has variable raised to the power

$$\begin{array}{l} - \\ x^2 + 6x - x + 10 \\ x^2 + 5x + 10 \end{array}$$

$$\begin{array}{l} - \\ 16 - 2x^3 + 4x - 10 \\ -2x^3 + 4x + 6 \end{array}$$

$$\begin{array}{l} - \\ 3x^2 + 10 - 3x + 5x^2 - 4 + x \\ 3x^2 + 5x^2 - 3x + x + 10 - 4 \\ 8x^2 - 2x + 6 \end{array}$$

Expressions with Distributive Property  $(x(y+z) = xy + xz)$

$$\begin{array}{l} - \\ 2(3x + 5y) \\ 6x + 10y \end{array}$$

$$\begin{array}{l} - \\ 4(x^2 + 3x - 5) \\ 4x^2 + 12x - 20 \end{array}$$

$$\begin{array}{l} - \\ x(x^2 - 8x + 2) \\ x \cdot x - 8x + 2x \\ x^3 - 8x^2 + 2x \end{array}$$

Un-distributing (Factoring Out)

$$\begin{array}{l} - \\ 4x^3 + 4x^2 + 4x \\ 4(x^3 + x^2 + x) \end{array}$$

$$\begin{array}{l} - \\ 8x + 6y + 4z \\ 2(4x + 3y + 2z) \end{array}$$

$$\begin{array}{l} - \\ xy^2 + xy + x \\ x(y^2 + y + 1) \end{array}$$