

# Multiplying Polynomials

→ Monomial is a Polynomial

Review Multiply these monomials

$$1) \quad \underline{(2x^2)}(\underline{x}) = 2x^3$$

$$2) \quad \underline{3x^2}(\underline{5x}) = 15x^3$$

$$3) \quad \underline{7x}(\underline{-2x}) = -14x^2$$

Recall Distributive Property

$$\underline{a}(b+c) = \underline{ab+ac}$$

To multiply a monomial by a polynomial, use the distributive property along with the product rule for exponents.

$$x^m \cdot x^n = x^{m+n}$$

Ex ①  $2x(3x+4) = 6x^2 + 8x$

②  $5x^2(2x^2 + 7x - 3) = 10x^4 + 35x^3 - 15x^2$

③  $-7y(4y^2 - y + 1) = -28y^3 + 7y^2 - 7y$