

Chapter 2.1 Adding and Subtracting Polynomials

↓ many terms

$$\underline{+3x^2} + 8x - 2$$

$8x$, $3x$ Like

$8x^2$, $3x$ unlike


$$\text{ex1: } \underline{(3x^2 + 4x - 8)} + \underline{(5x - 2 - 18x^2)}$$

$$= -15x^2 + 9x - 10$$

Descending Order: Largest exponent
to smallest

ex2: $(4x^2 - 2 + 5x)$ $- (8 + 2x - 3x^2)$

$$= \underline{4x^2} - \underline{2} + \underline{5x} - \underline{8} - \underline{2x} + \underline{3x^2}$$

$$= 7x^2 + 3x - 10$$

ex3: $4(2x^2 + 3x - 2) + 3(x - 2x^2)$

(Note: Red arrows point from the 4 to each term in the first parentheses, with the word "multiply" written above. Purple arrows point from the 3 to each term in the second parentheses.)

$$= 8x^2 + 12x - 8 + 3x - 6x^2$$
$$= 2x^2 + 15x - 8$$

$$\text{ex 4: } -6x(2x-4) + 2(x^2-8) - 3(2x^2-6x)$$

$$= -12x^2 + 24x + 2x^2 - 16 - 6x^2 + 18x$$

$$= -16x^2 + 42x - 16$$