

# Warm-up

Write Standard form, degree & leading coefficient.

①  ~~$3b^3 - 4b^4 + b^2$~~

S.F.:  $-4b^4 + 3b^3 + b^2$  } Degree: 4 } Lead Coef: -4

② Simplify  $5x + 4(2x + 7)$

$+4 \cdot 2x + 4 \cdot 7$

$5x + 8x + 28$

$13x + 28$

## 9.1b Add & Subtract Polynomials

Combine like terms - Has same variable & power/exponent

Adding

$$(2x^3 - 5x^2 + x) + (2x^2 + x^3 - 1)$$

\* Start with highest power

$$2x^3 - 5x^2 + x + 2x^2 + x^3 - 1$$

$\underbrace{2x^3 + x^3}_{2x^3 + x^3}$     
 $\underbrace{-5x^2 + 2x^2}_{-5x^2 + 2x^2}$     
 $\underbrace{x + x}_{x + x}$     
 $\underbrace{-1}_{-1}$

$$3x^3 - 3x^2 + x - 1$$

$$(4x^2 + x + 5) + (x^2 + 4x - 10)$$

$$5x^2 + 5x - 5$$

# Subtracting

$$\underline{1(4n^2 + 5)} - \underline{1(-2n^2 + 2n - 4)}$$

\* Careful... distribute the -!

$$\underline{4n^2 + 5} + \underline{2n^2} - \underline{2n} + 4$$

$$(6n^2 - 2n + 9)$$

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

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

$$(x^2 - 2x + 13)$$

# Homework

Add or Subtract

$$\textcircled{17} (5a^2 - 3) + (8a^2 - 1)$$

$$\textcircled{18} (h^2 + 4h - 4) + (5h^2 - 8h + 2)$$

$$\textcircled{19} (4m^2 - m + 2) + (-3m^2 + 10m + 7)$$

$$\textcircled{21} (6c^2 + 3c + 9) - (3c - 5)$$

$$\textcircled{\underline{24}} (9b^3 - 13b^2 + b) - (-13b^2 - 5b + 14)$$

$$\textcircled{22} (3x^2 - 8) - (4x^3 + x^2 - 15x + 1)$$