

TOPIC: ADDING AND SUBTRACTING POLYNOMIALS

Add & Subtract Polynomials

- ◆ Add/subtract polynomials by _____ **like terms** (same *vars* & same *exponents*).
- ▶ When subtracting, _____ the negative sign into the parentheses.

Recall

$$\begin{aligned}5x^2 - 3x^2 + x \\ = 2x^2 + x\end{aligned}$$

(Combine Like Terms)

Adding Polynomials	Subtracting Polynomials
$(6x^2 + 3x) + (2x - 8)$	$(x^2 - 2x + 4) - (5x + 10)$

- ◆ Sometimes it's helpful to stack polynomials *vertically* by aligning like terms.

EXAMPLE

Add $5x^2 + 2x + 3$ to $x^2 + 7x + 8$.

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PRACTICE

Add or subtract the polynomials.

(A) $(3x^2 + 9x + 15) - (-x^2 + 6x + 10)$

(B) $(2y^2 - 9y + 5) + (6y + 4y^2 - 7)$

(C) $(7x^3 + xy - 8) + (7x^2 - 8)$

PRACTICE

Find the sum of $5x^2 - 2x + 6$ and $-4x^2 + 2x + 8$.

PRACTICE

Subtract $y^2 + 3y - 4$ from $6y^2 - 7y + 9$.