

## Learning Target 6.2

How can I perform the different operations with polynomials.

Topic: Adding and Subtracting

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### 6.2 Day 1

-A polynomial is an algebraic expression that shows the sum of monomials.

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## 6.2 Day 1

Monomial - Polynomial with one term

Ex.  $x^3$ ,  $2x^2$ ,  $-5$

Binomial - Polynomial with two terms

Ex.  $x^3 + 4$ ,  $2x - 5$

Trinomial - Polynomial with three terms

Ex.  $3x^3 - 2x^2 + 1$ ,  $2x^2 + 3x - 1$

\*\*An expression with more than three terms is simply named by its number of terms- "four-term polynomial"

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When adding or subtracting polynomials, it is important to combine like terms.

4x and 3 $4x, 3$	NOT like terms	The second term has no variable
4x and 3y $4x, 3y$	NOT like terms	The second term now has a variable, but it doesn't match the variable of the first term
4x and $3x^2$ $4x, 3x^2$	NOT like terms	The second term now has the same variable, but the degree is different
4x and 3x $4x, 3x$	LIKE TERMS	Now the variables match and the degrees match

-Like terms have exactly the same variable(s) the same power(s).

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

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

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

$$\begin{array}{r} 4x^5 + 0x^4 + 3x^3 + 0x^2 + x - 5 \\ - (-2x^5 + 4x^4 - 4x^3 + x^2 - 3x - 2) \\ \hline 6x^5 - 4x^4 + 7x^3 - 2x^2 + 4x + 3 \end{array}$$

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$$(-8x^3 + x - 9x^2 + 2) + (8x^2 - 2x + 4) + (4x^2 - 1 - 3x^3)$$

$$\begin{array}{r} -8x^3 - 9x^2 + x + 2 \\ + (0x^3 + 8x^2 - 2x + 4) \\ \hline -8x^3 - 1x^2 - 1x + 6 \\ + (-3x^3 + 4x^2 + 0x - 1) \\ \hline -11x^3 + 3x^2 - 1x + 5 \end{array}$$

$$(6x^2 - x + 3) + (-2x + x^2 - 7)$$

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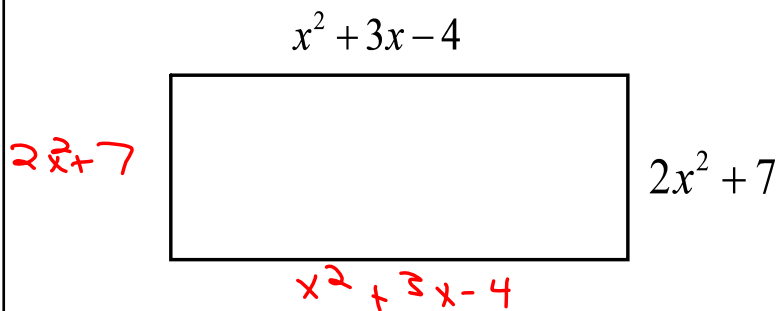
$$(-6x^3 + 5x - 3) - (2x^3 + 4x^2 - 3x + 1)$$

$$\begin{array}{r} -6x^3 + 0x^2 + 5x - 3 \\ - (2x^3 + 4x^2 - 3x + 1) \\ \hline -4x^3 - 4x^2 + 8x - 4 \end{array}$$

$$(12x - 8x^2 + 6) - (-8x^2 - 3x + 4)$$

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Find the Perimeter of the rectangle:



$$\begin{array}{r} 6x^2 + 6x + 6 \\ x^2 + 3x - 4 \\ x^2 + 3x - 4 \\ 2x^2 + 0x + 7 \\ 2x^2 + 0x + 7 \\ \hline 6x^2 + 6x + 6 \end{array}$$

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