

15.2 Adding Polynomials

Remember, you can only add like terms.

Example 1

Find $(5x - 7y) + (6x + 8y)$.

$$11x + 1y \text{ or } 11x + y$$

Example 2

Find $(7n + 2t) + (4n - 3t)$.

$$11n - 1t \text{ or } 11n - t$$

Example 3

Find $(3y^2 + 5y - 6) + (7y^2 - 9)$.

$$10y^2 + 5y - 15$$

Example 4

Find $(-5g^2 - 4g - 2) + (9g - 10)$.

$$-5g^2 + 5g - 12$$

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Example 5

Find $(m^2 - 2mn + n^2) + (4m^2 - 6n^2)$.

$$5m^2 - 2mn - 5n^2$$

Example 6

Find $(7xy^2 - 2x^2 - 4y^2) + (2y^2 + xy^2 + 5x^2)$.

$$8xy^2 + 3x^2 - 2y^2$$

Example 7

$$\begin{array}{r} 8k^2 + 6k - 11 \\ (+) -2k^2 - 13 \end{array}$$

$$6k^2 + 6k - 24$$

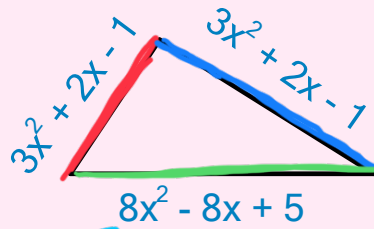
Example 8

$$\begin{array}{r} -5w^2 - 7w + 12 \\ (+) -w^2 + 16w - 8 \end{array}$$

$$-6w^2 + 9w + 4$$

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Example 9 add all the sides together
Find the **perimeter** of the triangle below.

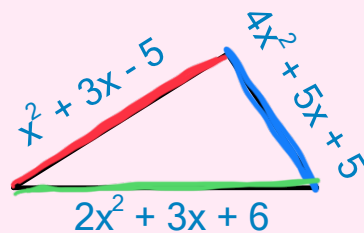


$$P = (3x^2 + 2x - 1) + (3x^2 + 2x - 1) + (8x^2 - 8x + 5)$$

$$P = 14x^2 - 4x + 3$$

Example 10

Find the perimeter of the triangle below.



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

$$P = 7x^2 + 11x + 6$$