

Adding and Subtracting Polynomials

Example

Add: $(2y^2 + 7y - 3) + (4y^2 - 3y + 5)$.

Group like terms horizontally, or set up the problem vertically with like terms in alignment.

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

Align like terms.
Add like terms.

Find the sum or difference.

- | | |
|---|---|
| <p>1 $(2x^2 + 9x + 13) + (5x^2 - 11x - 25)$</p> <p>3 $(9x^3 + 4xy - 7y^2) + (x^3 - xy + y^2 - 4y)$</p> <p>5 $(4x^3 + 3x^2 + 1) - (5x^3 - 8x)$</p> <p>7 $(x + x^2 + 17) + (x^3 - 4x^2 - 3)$</p> <p>9 $(-8x^3 + 5x^2 - 7) + (7x^3 - 2x^2 + x - 5)$</p> <p>11 $(-7x^2 - 5 + 3x) - (-2x + 3)$</p> | <p>2 $(5x^2 - 7x) - (-2x^2 - 2x + 4)$</p> <p>4 $(3x^4 + 11x^2) - (-2x^4 + x)$</p> <p>6 $(14x^2 + 16) + (2x + 7x^2 + 15)$</p> <p>8 $(11x^3 + 4y^2) - (2xy - 9y^2)$</p> <p>10 $(3x - 7y + 9y^2) + (7x + 4y^2 - 15)$</p> <p>12 $(-9x + 3xy - 5y) - (-x - y + 8)$</p> |
|---|---|

Answer Box

<p>A</p> $7x^2 - 2x - 12$	<p>B</p> $x^3 - 3x^2 + x + 14$	<p>C</p> $-7x^2 + 5x - 8$	<p>D</p> $-x^3 + 3x^2 + 8x + 1$	<p>E</p> $7x^2 - 5x - 4$	<p>F</p> $-8x + 3xy - 4y - 8$
<p>G</p> $13y^2 + 10x - 7y - 15$	<p>H</p> $5x^4 + 11x^2 - x$	<p>I</p> $-x^3 + 3x^2 + x - 12$	<p>J</p> $10x^3 + 3xy - 6y^2 - 4y$	<p>K</p> $11x^3 - 2xy + 13y^2$	<p>L</p> $21x^2 + 2x + 31$