

# Adding Polynomials

Simplify the following. Show the steps.

1  $(x^2 - 4x) + (x^2 - x)$

4  $5x^3 + 3x^2 - 2x + 7x + 13$

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

5  $(6x^3 + 8x + 9x^2 - 12)$

3  $(2x^3 - 2x) - (9x^2 + 8x + 7)$

6  $12(x^2 - 4x + 8) + 9(x^3 + x^2 + 11)$

7  $(3 - 6x^5 - 8x^4) - (-6x^4 - 3x - 8x^5)$

8  $(8a^3 - 6 + 3a^4) - (a^4 - 7a^3 - 3)$

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## Answers

1  $(x^2 - 4x) + (x^2 - x)$

4  $5x^3 + 3x^2 - 2x + 7x + 13$

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

$$\begin{array}{r} 5x^2 + 3x^2 + 5x + 13 \\ \hline (6x^3 + 8x + 9x^2 - 12) \end{array}$$

$$\begin{array}{r} 5x^3 - 11x^2 \\ \hline (2x^3 - 2x) - (9x^2 + 8x + 7) \end{array}$$

$$\begin{array}{r} 6x^3 + 9x^2 + 8x - 12 \\ \hline 12(x^2 - 4x + 8) + 9(x^3 + x^2 + 11) \end{array}$$

$$\begin{array}{r} 2x^3 - 9x^2 - 10x - 7 \\ \hline (3 - 6x^5 - 8x^4) - (-6x^4 - 3x - 8x^5) \end{array}$$

$$\begin{array}{r} 9x^3 + 21x^2 - 48x + 195 \\ \hline (8a^3 - 6 + 3a^4) - (a^4 - 7a^3 - 3) \end{array}$$

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

$$\underline{2a^4 + 15a^3 - 3}$$