

LESSON
17-3**Subtracting Polynomial Expressions***Practice and Problem Solving: A/B***Subtract using the vertical form.**

1.
$$\begin{array}{r} (5g^2 + 6g - 10) \\ - (2g^2 + 2g + 9) \\ \hline \end{array}$$

2.
$$\begin{array}{r} (8x^3 + 4x^2 + x) \\ - (2x^3 + x^2 + x) \\ \hline \end{array}$$

3.
$$\begin{array}{r} (10b^2 + 5b - 2) \\ - (2b^2 + b + 1) \\ \hline \end{array}$$

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

5.
$$\begin{array}{r} (14ab^2 + 9b - 2a) \\ - (4ab^2 + 2a + 5b) \\ \hline \end{array}$$

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

Subtract using the horizontal form.

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

8.
$$(11z^3 + 6z^2 + 3) - (9z^3 + 2z^2 - 8)$$

9.
$$(9s^3 + 10s + 8) - (2s^3 + 9s - 11)$$

10.
$$(25a^4 + 9a^2 + 3a) - (24a^4 - 5a^2 + 3a)$$

11.
$$(-a^2b^3 + a^3b - ab) - (a^2b^3 - a^3b + ab)$$

12.
$$(3p^4q^2 + 8p^3q - 2) - (5p^4q^2 - 2p^3q - 8)$$

Solve.

13. Darnell and Stephanie have competing refreshment stand businesses. Darnell's profit can be modeled with the polynomial $c^2 + 8c - 100$, where c is the number of items sold. Stephanie's profit can be modeled with the polynomial $2c^2 - 7c - 200$. Write a polynomial that represents the difference between Stephanie's profit and Darnell's profit.
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14. There are two boxes in a storage unit. The volume of the first box is $4x^3 + 4x^2$ cubic units. The volume of the second box is $6x^3 - 18x^2$ cubic units. Write a polynomial to show the difference between the two volumes.
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