

LESSON
4-3**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.

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.

LESSON 4-3

Practice and Problem Solving: A/B

1. $3g^2 + 4g - 19$
2. $6x^3 + 3x^2$
3. $8b^2 + 4b - 3$
4. $10c^3 - 7c^2 + 4c$
5. $10ab^2 + 4b - 4a$
6. $3x^3 + 4x^2 + 6x$
7. $3y^2 - 9y + 4$
8. $2z^3 + 4z^2 + 11$
9. $7s^3 + s + 19$
10. $a^4 + 14a^2$
11. $-2(a^2)(b^3) + 2(a^3)b - 2ab$
12. $-2p^4q^2 + 10p^3q + 6$
13. $c^2 - 15c - 100$
14. $2x^3 - 22x^2$