

# Homework Answers

## Polynomial Operations

Simplify the following expressions.

1.  $5x - (2x + 5)$   **$3x - 5$**

2.  $(5a - 3b) + (-2a + 4b)$   **$3a + b$**

3.  $(4y - 7) - (9 + 14y)$   **$-10y - 16$**

4.  $(3x^3)(-6x^5)$   **$-18x^8$**

5.  $2(x + 9)$   **$2x + 18$**

6.  $-6(x - 2y + 3z)$   **$-6x + 12y - 18z$**

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7.  $(5a + 3b) + 2(a - 3b)$   **$7a - 3b$**

8.  $(c + 9)(c + 3)$   **$c^2 + 12c + 27$**

9.  $(x + 1)(2x - 3)$   **$2x^2 - x - 3$**

10.  $\frac{w^2 + 8w}{w}$   **$w + 8$**

11.  $\frac{15k^3 - 9k^2 + 3k}{3k}$   **$5k^2 - 3k + 1$**

12. Subtract  $(6x^2 - 3x + 50)$  from  $(8x^2 - 5x + 9)$   

$$(8x^2 - 5x + 9) - (6x^2 - 3x + 50)$$
  
 **$2x^2 - 2x - 41$**