

## 5.1B: Operations with Polynomials

Date \_\_\_\_\_ Period \_\_\_\_\_

**Simplify each expression.**

1)  $2n^4 - n - 5n + 4n^3$

2)  $9 - 8a^3 - 2a^3 + 2a^2$

3)  $(k - 8) - (8k^2 + 7k)$

4)  $(7x^4 + 5x^2) + (8x^2 - 2x^4)$

5)  $(7 + 6a^2) + (10 + 4a^2 + 4a^3)$

6)  $(4x^2 - 6x^3) - (8 - 5x^3 + x^2)$

7)  $(-8 + 10x^4 - 10x^3) - (-8 - 4x^3)$

8)  $(-7n^3 + 2n^2 + 9) + (8n^3 - 5n^2)$

9)  $(-5x - x^4 + 5x^3) + (9x + 5x^2 + 7x^4)$

10)  $(-4b^2 + 9 + 8b) - (-9b^4 - 1 - 10b)$

11)  $2r(6 - 3r) + 6r(r - 2)$

12)  $-2x(6x - 5) - 8x(1 + 5x)$

**Find each product.**

13)  $(2u - 7v)(3u - 2v)$

14)  $(4x - 2y)(x^2 - 8xy + 3y^2)$