

## Polynomial Operations

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

**Simplify each expression.**

1)  $(2 - 5x^2) - (x^4 + 1)$

2)  $(2v^3 - 3v^2) - (5v^2 - 5v^3)$

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

4)  $(-6x^4 + 3x^2 - 10x) - (-13x^4 + 3x^2 - 2x)$

5)  $(10a^2b^2 + 3a^4b) - (-10a^2b^2 + 13a^4b + 9b^4) + (-8a^2b^2 + 11a^4b)$

6)  $(-9 + 11x^3) - (x^4y^4 - 9x^3 + 10) - (7 + 11x^3)$

**Find each product.**

7)  $(4x + 2)(6x + 7)$

8)  $(7x + 3)(5x - 5)$

9)  $(7x + 3)(7x + 4)$

10)  $(m - 1)(5m - 2)$

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

**Simplify each expression.**

1)  $(2 - 5x^2) - (x^4 + 1)$

$$-x^4 - 5x^2 + 1$$

2)  $(2v^3 - 3v^2) - (5v^2 - 5v^3)$

$$7v^3 - 8v^2$$

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

$$9a^5 - 5a^4 + 3a^2$$

4)  $(-6x^4 + 3x^2 - 10x) - (-13x^4 + 3x^2 - 2x)$

$$7x^4 - 8x$$

5)  $(10a^2b^2 + 3a^4b) - (-10a^2b^2 + 13a^4b + 9b^4) + (-8a^2b^2 + 11a^4b)$

$$a^4b + 12a^2b^2 - 9b^4$$

6)  $(-9 + 11x^3) - (x^4y^4 - 9x^3 + 10) - (7 + 11x^3)$

$$-x^4y^4 + 9x^3 - 26$$

**Find each product.**

7)  $(4x + 2)(6x + 7)$

$$24x^2 + 40x + 14$$

8)  $(7x + 3)(5x - 5)$

$$35x^2 - 20x - 15$$

9)  $(7x + 3)(7x + 4)$

$$49x^2 + 49x + 12$$

10)  $(m - 1)(5m - 2)$

$$5m^2 - 7m + 2$$