Math 2

Name **Key**

Date_____

Add, Subtract, & Multiply Polynomials

Simplify each expression.

1) $(5x^4 - 5x^3 - 7x^2) - (7x^3 + 8x^2 - 8x^4)$

$13x^4 - 12x^3 - 15x^2$

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

$10x^4 - 5x^2 - 5x - 7$

3) $(2r + 8 + 3r^3) + (r - 8r^3 - 5)$

$-5r^3 + 3r + 3$

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

$x^3 - x^2$

5) $(8a + 3a^3 + 1) - (6a^2 + a^4 - 3a) - (8 - 4a^2)$

$-a^4 + 3a^3 - 2a^2 + 11a - 7$

6) $(8 + r - 7r^3) + (5r^2 + 8r^4 - 8r^3) - (4 - 2r^3)$

$8r^4 - 13r^3 + 5r^2 + r + 4$

Find each product.

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

$6k^5 + 16k^4 + 6k^3$

8) $(p + 1)(5p - 4)$

$5p^2 + p - 4$

9) $(8p - 4)(4p + 1)$

$32p^2 - 8p - 4$

10) $(4v + 4)(6v - 2)$

$24v^2 + 16v - 8$

11) $(n + 8)(6n + 8)$

$6n^2 + 56n + 64$

12) $(4n - 6)(2n^2 + 5n - 1)$

$8n^3 + 8n^2 - 34n + 6$

3) $(x - 7)^2$

$x^2 - 14x + 49$

14) $(2p + 3)(2p - 3)$

$4p^2 - 9$