

Name_____

Date_____ Period_____

Adding and Subtracting Polynomials

Simplify each expression.

1) $(5 + 5n^3) - (1 - 3n^3)$

2) $(6a - 3a^2) + (2a^2 - 3a)$

3) $(x^2 - x) + (8x - 2x^2)$

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

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

6) $(8n^2 - 2n^3) + (6n^3 - 8n^2)$

7) $(8b^3 + 8) - (6 - 7b^3)$

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

9) $(10p^4 + 11) - (11p^4 + 13 + 16p^2)$

10) $(20v^2 - 9v^3) - (7v^3 - 10v^4 - 14v^2)$

11) $(10x^4 - 16) + (12 - 6x^3 + 11x^4)$

12) $(14 + 12a^3) + (17a^4 + 15 - 5a^3)$

$$13) (17v^2 - 8) + (17v^2 + 10 + v^3)$$

$$14) (20n + 11n^4) - (15n + 16n^2 - 17n^4)$$

$$15) (10k^4 + 17k^3) - (14k^3 - 2k + 9k^4)$$

$$16) (9r + 6r^4) + (12r - 2r^4 - 17)$$

$$17) (6r + 2 + 8r^3) - (5r^3 - 11 - 8r^5) - (6r + 9r^5)$$

$$18) (9a^4 + 1 - 11a^2) - (a + 8a^2 + 2) - (6a^2 - 9)$$

$$19) (9k - 9 - 12k^4) - (4k + k^4 + 4) - (10 + 7k)$$

$$20) (8x^4 - 12 + 3x) - (9x^4 + 7 - 11x) + (9x + 8)$$

$$21) (7r^2 + r^3 - 3) + (6r^3 - 3r^2 + 10) + (2 + r^2)$$

$$22) (10x + 8x^5 - 2) + (12 + x - 6x^4) - (x^4 - x^2)$$

$$23) (p^4 + 8p + 6) + (7p - 3p^4 + 6) - (10 + 10p)$$

$$24) (9n^5 + 2n - 11) - (11n - 7n^5 + 3) - (5 + 7n)$$

Adding and Subtracting Polynomials

Simplify each expression.

1) $(5 + 5n^3) - (1 - 3n^3)$

$$8n^3 + 4$$

2) $(6a - 3a^2) + (2a^2 - 3a)$

$$-a^2 + 3a$$

3) $(x^2 - x) + (8x - 2x^2)$

$$-x^2 + 7x$$

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

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

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

$$-5x^3 + 5x^2 - 1$$

6) $(8n^2 - 2n^3) + (6n^3 - 8n^2)$

$$4n^3$$

7) $(8b^3 + 8) - (6 - 7b^3)$

$$15b^3 + 2$$

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

$$9x^3 - 3$$

9) $(10p^4 + 11) - (11p^4 + 13 + 16p^2)$

$$-p^4 - 16p^2 - 2$$

10) $(20v^2 - 9v^3) - (7v^3 - 10v^4 - 14v^2)$

$$10v^4 - 16v^3 + 34v^2$$

11) $(10x^4 - 16) + (12 - 6x^3 + 11x^4)$

$$21x^4 - 6x^3 - 4$$

12) $(14 + 12a^3) + (17a^4 + 15 - 5a^3)$

$$17a^4 + 7a^3 + 29$$

$$13) (17v^2 - 8) + (17v^2 + 10 + v^3)$$

$$v^3 + 34v^2 + 2$$

$$14) (20n + 11n^4) - (15n + 16n^2 - 17n^4)$$

$$28n^4 - 16n^2 + 5n$$

$$15) (10k^4 + 17k^3) - (14k^3 - 2k + 9k^4)$$

$$k^4 + 3k^3 + 2k$$

$$16) (9r + 6r^4) + (12r - 2r^4 - 17)$$

$$4r^4 + 21r - 17$$

$$17) (6r + 2 + 8r^3) - (5r^3 - 11 - 8r^5) - (6r + 9r^5)$$

$$-r^5 + 3r^3 + 13$$

$$18) (9a^4 + 1 - 11a^2) - (a + 8a^2 + 2) - (6a^2 - 9)$$

$$9a^4 - 25a^2 - a + 8$$

$$19) (9k - 9 - 12k^4) - (4k + k^4 + 4) - (10 + 7k)$$

$$-13k^4 - 2k - 23$$

$$20) (8x^4 - 12 + 3x) - (9x^4 + 7 - 11x) + (9x + 8)$$

$$-x^4 + 23x - 11$$

$$21) (7r^2 + r^3 - 3) + (6r^3 - 3r^2 + 10) + (2 + r^2)$$

$$7r^3 + 5r^2 + 9$$

$$22) (10x + 8x^5 - 2) + (12 + x - 6x^4) - (x^4 - x^2)$$

$$8x^5 - 7x^4 + x^2 + 11x + 10$$

$$23) (p^4 + 8p + 6) + (7p - 3p^4 + 6) - (10 + 10p)$$

$$-2p^4 + 5p + 2$$

$$24) (9n^5 + 2n - 11) - (11n - 7n^5 + 3) - (5 + 7n)$$

$$16n^5 - 16n - 19$$