

Adding and Subtracting Polynomials

Name each polynomial by degree and number of terms.

1) $3a^2 + 8$

2) $4n - 5$

3) $-9n^4$

4) $-9p + 9 + p^5$

Simplify each sum.

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

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

Simplify each difference.

7) $(2n - 1) - (6n - 8 + 5n^2)$

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

Simplify each expression.

9) $(5x^2y^2 - 5y^2) - (7x^2y^2 + 10y^2 - 2x^2y) + (11y^2 - 5x^4y^4)$

$$10) (5y^4 - 14x^2y^4) - (-y^4 + 8x^2y^4 + 13x^2) - (8x^2y^4 - 3y^4)$$

Name each polynomial by degree and number of terms.

$$11) 7x^2 - 5x$$

$$12) 9$$

Simplify each expression.

$$13) (x - x^2) + (4x^2 + x)$$

$$14) (5n^3 - 2) + (5n^3 + 5n^2)$$

$$15) (-13n^4 + 6 - 10n) + (-9n + 10 - 11n^4)$$

$$16) (2x^5 - x^4 + 8) + (9 - 4x^4 + 4x^5)$$

$$17) (8x^4y^2 - 9xy^3) - (10x^4y^2 + 14x^3 + 11xy^3) + (x^4y^2 + 3xy^4)$$

$$18) (-8b^2 - 7a^2) + (-5a^2b^3 - 9b^2 - b^3) + (9a^2 + a^2b^3)$$