

## 1.4 Add and Subtract Polynomials

## PRACTICE

Rewrite each polynomial in standard form and then state the degree of the polynomial.

1.  $5x^2 - 4x^3 + 5$   
 $-4x^3 + 5x^2 + 5$

Degree = 3

2.  $10x^6 - 13x^7$   
 $-13x^7 + 10x^6$

Degree = 7

3.  $6 - 4g^2 + 7g + 5g^3$   
 $5g^3 - 4g^2 + 7g + 6$

Degree = 3

4.  $8 - x$   
 $-x + 8$

Degree = 1

5.  $4(1 + 3x + 5x^2)$   
 $4 + 12x + 20x^2$   
 $20x^2 + 12x + 4$

Degree = 2

6.  $16 + x^2$   
 $x^2 + 16$

Degree = 2

Find each sum or difference. Write your solution in standard form.

7.  $(5a^2 - 3) + (8a^2 - 1)$   
 $5a^2 - 3 + 8a^2 - 1$   
 $5a^2 + 8a^2 - 3 - 1$

$13a^2 - 4$

8.  $(7k^2 + 2k - 6) - (3k^2 - 11k - 8)$   
 $7k^2 + 2k - 6 - 3k^2 + 11k + 8$   
 $7k^2 - 3k^2 + 2k + 11k - 6 + 8$

$4k^2 + 13k + 2$

9.  $(4m^2 - m + 2) + (-3m^2 + 10m + 7)$   
 $4m^2 - m + 2 - 3m^2 + 10m + 7$   
 $4m^2 - 3m^2 - m + 10m + 2 + 7$

$m^2 + 9m + 9$

10.  $(6c^2 + 3c + 9) - (3c - 5)$   
 $6c^2 + 3c + 9 - 3c + 5$   
 $6c^2 + 3c - 3c + 9 + 5$

$6c^2 + 14$

$$11. 2(n^2 + 2n) - (2n^3 - n^2 + n + 12)$$

$$2n^2 + 4n - 2n^3 + n^2 - n - 12$$

$$-2n^3 + 2n^2 + n^2 + 4n - n - 12$$

$$-2n^3 + 3n^2 + 3n - 12$$

$$12. (9b^3 - 13b^2 + b) + (13b^2 - 5b + 14)$$

$$9b^3 - 13b^2 + b + 13b^2 - 5b + 14$$

$$9b^3 - 13b^2 + 13b^2 + b - 5b + 14$$

$$9b^3 - 4b + 14$$

$$13. 3(x^2 + 2) - 4(x^2 + 5)$$

$$3x^2 + 6 - 4x^2 - 20$$

$$3x^2 - 4x^2 + 6 - 20$$

$$-x^2 - 14$$

$$14. (d^2 + 3d) - (2d^3 - d^2) + (5d^2 - 4d + 3)$$

$$d^2 + 3d - 2d^3 + d^2 + 5d^2 - 4d + 3$$

$$-2d^3 + d^2 + d^2 + 5d^2 + 3d - 4d + 3$$

$$-2d^3 + 7d^2 - d + 3$$