

Subtracting Quadratic Expressions (A)

Simplify each expression.

1. $(-8s^2 + 7s - 7) - (3s^2 - 9s + 2)$

2. $(-6p^2 - 2p - 7) - 5(-8p^2 - 9p + 9)$

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

4. $7(-9n^2 + 6n + 6) - 4(-n^2 + 8n - 6)$

5. $-(4r^2 + 3r + 8) - 8(9r^2 + 4r + 2)$

6. $(-5r^2 + 8r + 2) - (6r^2 - 8r - 6)$

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

8. $(-2a^2 - 4a - 1) - (-5a^2 - 8a + 9)$

9. $(-8g^2 - 4g + 3) - 8(3g^2 - 7g + 5)$

10. $(-3t^2 + 8t + 6) - 7(-8t^2 - t - 2)$

Subtracting Quadratic Expressions (A) Answers

Simplify each expression.

1. $(-8s^2 + 7s - 7) - (3s^2 - 9s + 2)$
 $-11s^2 + 16s - 9$

2. $(-6p^2 - 2p - 7) - 5(-8p^2 - 9p + 9)$
 $34p^2 + 43p - 52$

3. $-4(-8v^2 + 5v) - (4v^2 + 3v + 6)$
 $28v^2 - 23v - 6$

4. $7(-9n^2 + 6n + 6) - 4(-n^2 + 8n - 6)$
 $-59n^2 + 10n + 66$

5. $-(4r^2 + 3r + 8) - 8(9r^2 + 4r + 2)$
 $-76r^2 - 35r - 24$

6. $(-5r^2 + 8r + 2) - (6r^2 - 8r - 6)$
 $-11r^2 + 16r + 8$

7. $2(k^2 + k - 7) - (8k^2 + 6k + 6)$
 $-6k^2 - 4k - 20$

8. $(-2a^2 - 4a - 1) - (-5a^2 - 8a + 9)$
 $3a^2 + 4a - 10$

9. $(-8g^2 - 4g + 3) - 8(3g^2 - 7g + 5)$
 $-32g^2 + 52g - 37$

10. $(-3t^2 + 8t + 6) - 7(-8t^2 - t - 2)$
 $53t^2 + 15t + 20$

Subtracting Quadratic Expressions (B)

Simplify each expression.

1. $-9(-d^2 - 5d + 8) - (d^2 + 7d + 7)$

2. $(6f^2 + 6f - 2) - 3(7f^2 - 7f - 4)$

3. $(-7y^2 + 5y - 6) - 7(y^2 + 5y - 6)$

4. $(-3h^2 + 2h - 3) - 9(-6h^2 - 6h + 2)$

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

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

7. $-6(-9h^2 + 6h + 5) - 3(-9h^2 - h)$

8. $8(5v^2 + 9v - 2) - 5(-3v^2 - 4v - 5)$

9. $(-8t^2 - 2t - 8) - (4t^2 - 7t - 7)$

10. $-5(-2r^2 - 7r - 3) - (-9r^2 + 9r + 3)$

Subtracting Quadratic Expressions (B) Answers

Simplify each expression.

1. $-9(-d^2 - 5d + 8) - (d^2 + 7d + 7)$
 $8d^2 + 38d - 79$

2. $(6f^2 + 6f - 2) - 3(7f^2 - 7f - 4)$
 $-15f^2 + 27f + 10$

3. $(-7y^2 + 5y - 6) - 7(y^2 + 5y - 6)$
 $-14y^2 - 30y + 36$

4. $(-3h^2 + 2h - 3) - 9(-6h^2 - 6h + 2)$
 $51h^2 + 56h - 21$

5. $3(-6f^2 - 8f) - (-f^2 + 4f + 7)$
 $-17f^2 - 28f - 7$

6. $-4(-4c^2 + 3c - 6) - 5(8c^2 + 7c - 2)$
 $-24c^2 - 47c + 34$

7. $-6(-9h^2 + 6h + 5) - 3(-9h^2 - h)$
 $81h^2 - 33h - 30$

8. $8(5v^2 + 9v - 2) - 5(-3v^2 - 4v - 5)$
 $55v^2 + 92v + 9$

9. $(-8t^2 - 2t - 8) - (4t^2 - 7t - 7)$
 $-12t^2 + 5t - 1$

10. $-5(-2r^2 - 7r - 3) - (-9r^2 + 9r + 3)$
 $19r^2 + 26r + 12$

Subtracting Quadratic Expressions (C)

Simplify each expression.

1. $-(9h^2 - 8h + 1) - (2h^2 - 4h + 9)$

2. $-7(6b^2 - 4b - 8) - 4(-4b^2 + 3b + 4)$

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

4. $(-9t^2 - 8t - 1) - (3t^2 - 5t - 8)$

5. $(2h^2 + 2h + 4) - 9(8h^2 + 5h - 3)$

6. $(-9f^2 + 3f - 8) - 5(-6f^2 - 6f - 5)$

7. $(7y^2 - 6y + 3) - 7(3y^2 - 3y - 2)$

8. $(-9y^2 + 7y + 1) - 9(-4y^2 - 5y + 3)$

9. $(-8k^2 - 6k - 5) - (-2k^2 - 7k - 3)$

10. $-4(-9a^2 + 4a - 2) - 9(-5a^2 - 8a - 9)$

Subtracting Quadratic Expressions (C) Answers

Simplify each expression.

1. $-(9h^2 - 8h + 1) - (2h^2 - 4h + 9)$
 $-11h^2 + 12h - 10$

2. $-7(6b^2 - 4b - 8) - 4(-4b^2 + 3b + 4)$
 $-26b^2 + 16b + 40$

3. $4(-5t^2 - 6t + 2) - 8(-t^2 - t + 5)$
 $-12t^2 - 16t - 32$

4. $(-9t^2 - 8t - 1) - (3t^2 - 5t - 8)$
 $-12t^2 - 3t + 7$

5. $(2h^2 + 2h + 4) - 9(8h^2 + 5h - 3)$
 $-70h^2 - 43h + 31$

6. $(-9f^2 + 3f - 8) - 5(-6f^2 - 6f - 5)$
 $21f^2 + 33f + 17$

7. $(7y^2 - 6y + 3) - 7(3y^2 - 3y - 2)$
 $-14y^2 + 15y + 17$

8. $(-9y^2 + 7y + 1) - 9(-4y^2 - 5y + 3)$
 $27y^2 + 52y - 26$

9. $(-8k^2 - 6k - 5) - (-2k^2 - 7k - 3)$
 $-6k^2 + k - 2$

10. $-4(-9a^2 + 4a - 2) - 9(-5a^2 - 8a - 9)$
 $81a^2 + 56a + 89$

Subtracting Quadratic Expressions (D)

Simplify each expression.

1. $(7q^2 - 6q + 1) - (-9q^2 + 4q - 1)$

2. $-5(7g^2 + g - 3) - 9(6g^2 + 7g - 8)$

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

4. $(6t^2 + 4t + 9) - (-4t^2 - 4t + 7)$

5. $(8b^2 - 6b + 5) - 2(7b^2 - 5b + 7)$

6. $3(9k^2 - 5k - 2) - 5(-9k^2 - k - 1)$

7. $-2(-4k^2 - 3k - 8) - (k^2 + 9k - 8)$

8. $7(-9f^2 + 5f - 6) - 5(8f^2 + 3f - 9)$

9. $(-7f^2 + 3f - 9) - 3(7f^2 - 5f + 7)$

10. $-(-9q^2 + 8q + 8) - (-9q^2 - 5q + 7)$

Subtracting Quadratic Expressions (D) Answers

Simplify each expression.

1. $(7q^2 - 6q + 1) - (-9q^2 + 4q - 1)$
 $16q^2 - 10q + 2$

2. $-5(7g^2 + g - 3) - 9(6g^2 + 7g - 8)$
 $-89g^2 - 68g + 87$

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

4. $(6t^2 + 4t + 9) - (-4t^2 - 4t + 7)$
 $10t^2 + 8t + 2$

5. $(8b^2 - 6b + 5) - 2(7b^2 - 5b + 7)$
 $-6b^2 + 4b - 9$

6. $3(9k^2 - 5k - 2) - 5(-9k^2 - k - 1)$
 $72k^2 - 10k - 1$

7. $-2(-4k^2 - 3k - 8) - (k^2 + 9k - 8)$
 $7k^2 - 3k + 24$

8. $7(-9f^2 + 5f - 6) - 5(8f^2 + 3f - 9)$
 $-103f^2 + 20f + 3$

9. $(-7f^2 + 3f - 9) - 3(7f^2 - 5f + 7)$
 $-28f^2 + 18f - 30$

10. $-(-9q^2 + 8q + 8) - (-9q^2 - 5q + 7)$
 $18q^2 - 3q - 15$

Subtracting Quadratic Expressions (E)

Simplify each expression.

1. $(-7b^2 + 8b + 4) - 8(4b^2 + 8b - 4)$

2. $4(-4c^2 + 2c - 1) - (3c^2 - 3c + 7)$

3. $(9x^2 + x - 8) - (2x^2 + 3x - 1)$

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

5. $(3s^2 + 4s + 9) - 3(-6s^2 - 7s - 2)$

6. $(5t^2 + 8) - 8(t^2 - 9t - 9)$

7. $(-9v^2 - 9) - 4(v^2 + 6v + 9)$

8. $(-7m + 5) - 6(-7m^2 - 7m + 6)$

9. $4(9a^2 + 2a + 1) - 8(7a^2 - 8a + 6)$

10. $(n^2 + 4n + 2) - (-5n^2 + 9n + 2)$

Subtracting Quadratic Expressions (E) Answers

Simplify each expression.

1. $(-7b^2 + 8b + 4) - 8(4b^2 + 8b - 4)$
 $-39b^2 - 56b + 36$

2. $4(-4c^2 + 2c - 1) - (3c^2 - 3c + 7)$
 $-19c^2 + 11c - 11$

3. $(9x^2 + x - 8) - (2x^2 + 3x - 1)$
 $7x^2 - 2x - 7$

4. $-6(8k^2 + k - 7) - 6(-8k^2 + 5k - 5)$
 $-36k + 72$

5. $(3s^2 + 4s + 9) - 3(-6s^2 - 7s - 2)$
 $21s^2 + 25s + 15$

6. $(5t^2 + 8) - 8(t^2 - 9t - 9)$
 $-3t^2 + 72t + 80$

7. $(-9v^2 - 9) - 4(v^2 + 6v + 9)$
 $-13v^2 - 24v - 45$

8. $(-7m + 5) - 6(-7m^2 - 7m + 6)$
 $42m^2 + 35m - 31$

9. $4(9a^2 + 2a + 1) - 8(7a^2 - 8a + 6)$
 $-20a^2 + 72a - 44$

10. $(n^2 + 4n + 2) - (-5n^2 + 9n + 2)$
 $6n^2 - 5n$

Subtracting Quadratic Expressions (F)

Simplify each expression.

1. $(-4q^2 - q - 9) - (-8q^2 - 5q - 8)$

2. $-7(-5t^2 + 8t + 1) - 3(-6t^2 + 7t - 6)$

3. $(-9b^2 - 9b - 1) - 4(6b^2 + 7b + 6)$

4. $-7(-5g^2 + 4g - 9) - 7(5g^2 + 8g + 6)$

5. $(-9w^2 + 8w - 1) - 8(2w^2 + 6w - 4)$

6. $(-3w^2 - 4w + 2) - (-5w^2 + 5w - 4)$

7. $(5h^2 + 9h - 5) - 7(3h^2 - 8h + 7)$

8. $5(-n^2 - 9n - 8) - 9(-7n^2 - n - 6)$

9. $(3w^2 - 5w + 7) - 6(5w^2 - 7w + 7)$

10. $(-8x^2 + 8x - 2) - 5(-6x^2 + 3x + 2)$

Subtracting Quadratic Expressions (F) Answers

Simplify each expression.

1. $(-4q^2 - q - 9) - (-8q^2 - 5q - 8)$
 $4q^2 + 4q - 1$

2. $-7(-5t^2 + 8t + 1) - 3(-6t^2 + 7t - 6)$
 $53t^2 - 77t + 11$

3. $(-9b^2 - 9b - 1) - 4(6b^2 + 7b + 6)$
 $-33b^2 - 37b - 25$

4. $-7(-5g^2 + 4g - 9) - 7(5g^2 + 8g + 6)$
 $-84g + 21$

5. $(-9w^2 + 8w - 1) - 8(2w^2 + 6w - 4)$
 $-25w^2 - 40w + 31$

6. $(-3w^2 - 4w + 2) - (-5w^2 + 5w - 4)$
 $2w^2 - 9w + 6$

7. $(5h^2 + 9h - 5) - 7(3h^2 - 8h + 7)$
 $-16h^2 + 65h - 54$

8. $5(-n^2 - 9n - 8) - 9(-7n^2 - n - 6)$
 $58n^2 - 36n + 14$

9. $(3w^2 - 5w + 7) - 6(5w^2 - 7w + 7)$
 $-27w^2 + 37w - 35$

10. $(-8x^2 + 8x - 2) - 5(-6x^2 + 3x + 2)$
 $22x^2 - 7x - 12$

Subtracting Quadratic Expressions (G)

Simplify each expression.

1. $4(-8s^2 - 8s + 6) - 2(-s^2 + s - 8)$

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

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

4. $-8(-8c^2 + 8c + 2) - (8c^2 - 4c - 2)$

5. $7(-8b^2 + 7b - 6) - (b^2 - b - 5)$

6. $(-s^2 + 5s - 9) - (5s^2 - 2s + 9)$

7. $-7(-4s^2 - 6s + 3) - 8(-s^2 + 9s + 4)$

8. $4(-2x^2 - 4x + 9) - (-4x^2 - 3x + 8)$

9. $(-3x^2 + 3x - 5) - (7x^2 + 5x - 5)$

10. $3(-9r^2 - 6r - 8) - (-2r^2 - 2r - 6)$

Subtracting Quadratic Expressions (G) Answers

Simplify each expression.

1. $4(-8s^2 - 8s + 6) - 2(-s^2 + s - 8)$
 $-30s^2 - 34s + 40$

2. $-4(5w^2 + 5w + 6) - (-3w^2 - 8w + 2)$
 $-17w^2 - 12w - 26$

3. $-7(3q^2 + 8q + 5) - (-3q^2 + 5q - 7)$
 $-18q^2 - 61q - 28$

4. $-8(-8c^2 + 8c + 2) - (8c^2 - 4c - 2)$
 $56c^2 - 60c - 14$

5. $7(-8b^2 + 7b - 6) - (b^2 - b - 5)$
 $-57b^2 + 50b - 37$

6. $(-s^2 + 5s - 9) - (5s^2 - 2s + 9)$
 $-6s^2 + 7s - 18$

7. $-7(-4s^2 - 6s + 3) - 8(-s^2 + 9s + 4)$
 $36s^2 - 30s - 53$

8. $4(-2x^2 - 4x + 9) - (-4x^2 - 3x + 8)$
 $-4x^2 - 13x + 28$

9. $(-3x^2 + 3x - 5) - (7x^2 + 5x - 5)$
 $-10x^2 - 2x$

10. $3(-9r^2 - 6r - 8) - (-2r^2 - 2r - 6)$
 $-25r^2 - 16r - 18$

Subtracting Quadratic Expressions (H)

Simplify each expression.

1. $(-8d^2 + 7d + 2) - 2(-7d^2 + 2d - 1)$

2. $(8b^2 - 2b + 1) - (-2b^2 + 2b + 5)$

3. $-4(-2c^2 + 3c + 8) - (3c^2 + 6c - 6)$

4. $(-5p^2 - 2p - 9) - 5(7p^2 + 6p + 7)$

5. $-6(9m^2 - 3m - 6) - (m^2 + 4m + 3)$

6. $(7c^2 + 4c + 4) - 3(2c^2 + 5c + 1)$

7. $(8q^2 + 2q - 9) - 2(-9q^2 - 9q - 9)$

8. $(-9p^2 - 9p - 9) - 3(-p^2 + 6p - 3)$

9. $(8q^2 + 2q + 1) - 4(6q^2 - q - 5)$

10. $(-2g^2 - 5g - 7) - (-4g^2 - 6g - 7)$

Subtracting Quadratic Expressions (H) Answers

Simplify each expression.

1. $(-8d^2 + 7d + 2) - 2(-7d^2 + 2d - 1)$
 $6d^2 + 3d + 4$

2. $(8b^2 - 2b + 1) - (-2b^2 + 2b + 5)$
 $10b^2 - 4b - 4$

3. $-4(-2c^2 + 3c + 8) - (3c^2 + 6c - 6)$
 $5c^2 - 18c - 26$

4. $(-5p^2 - 2p - 9) - 5(7p^2 + 6p + 7)$
 $-40p^2 - 32p - 44$

5. $-6(9m^2 - 3m - 6) - (m^2 + 4m + 3)$
 $-55m^2 + 14m + 33$

6. $(7c^2 + 4c + 4) - 3(2c^2 + 5c + 1)$
 $c^2 - 11c + 1$

7. $(8q^2 + 2q - 9) - 2(-9q^2 - 9q - 9)$
 $26q^2 + 20q + 9$

8. $(-9p^2 - 9p - 9) - 3(-p^2 + 6p - 3)$
 $-6p^2 - 27p$

9. $(8q^2 + 2q + 1) - 4(6q^2 - q - 5)$
 $-16q^2 + 6q + 21$

10. $(-2g^2 - 5g - 7) - (-4g^2 - 6g - 7)$
 $2g^2 + g$

Subtracting Quadratic Expressions (I)

Simplify each expression.

1. $(2n^2 - 9n - 4) - 3(8n^2 - 2n + 9)$

2. $(9d^2 - 5d + 2) - 3(8d^2 + 4d - 3)$

3. $(-c^2 - 3c - 6) - 6(7c^2 + 6c - 2)$

4. $(-4r^2 - 4r + 8) - 3(8r^2 + 3r - 8)$

5. $-4(5v^2 + 2v + 2) - 7(-8v^2 - v - 7)$

6. $(-x^2 + 8x + 7) - (4x^2 + 7x - 2)$

7. $-2(-3a^2 + 9a - 4) - 3(-7a^2 + 6a + 3)$

8. $-6(-7s^2 - s - 2) - (6s^2 + 2s - 1)$

9. $(t^2 - 7t + 6) - 5(8t^2 - 8t - 5)$

10. $-7(-7r^2 - 7r + 5) - (-7r^2 - 2r - 7)$

Subtracting Quadratic Expressions (I) Answers

Simplify each expression.

1. $(2n^2 - 9n - 4) - 3(8n^2 - 2n + 9)$
 $-22n^2 - 3n - 31$

2. $(9d^2 - 5d + 2) - 3(8d^2 + 4d - 3)$
 $-15d^2 - 17d + 11$

3. $(-c^2 - 3c - 6) - 6(7c^2 + 6c - 2)$
 $-43c^2 - 39c + 6$

4. $(-4r^2 - 4r + 8) - 3(8r^2 + 3r - 8)$
 $-28r^2 - 13r + 32$

5. $-4(5v^2 + 2v + 2) - 7(-8v^2 - v - 7)$
 $36v^2 - v + 41$

6. $(-x^2 + 8x + 7) - (4x^2 + 7x - 2)$
 $-5x^2 + x + 9$

7. $-2(-3a^2 + 9a - 4) - 3(-7a^2 + 6a + 3)$
 $27a^2 - 36a - 1$

8. $-6(-7s^2 - s - 2) - (6s^2 + 2s - 1)$
 $36s^2 + 4s + 13$

9. $(t^2 - 7t + 6) - 5(8t^2 - 8t - 5)$
 $-39t^2 + 33t + 31$

10. $-7(-7r^2 - 7r + 5) - (-7r^2 - 2r - 7)$
 $56r^2 + 51r - 28$

Subtracting Quadratic Expressions (J)

Simplify each expression.

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

2. $(9d^2 + 9d + 7) - (7d^2 - 8d + 8)$

3. $(7w^2 - 6w - 2) - (-w^2 + 3w - 9)$

4. $8(3z^2 + z + 4) - (-2z^2 - 8z + 6)$

5. $(3t^2 - 2t + 5) - 3(t^2 - t - 4)$

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

7. $6(7p^2 + 8p + 9) - 7(-3p^2 + 3p + 8)$

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

9. $(x^2 + 5x - 6) - (-3x^2 - x + 4)$

10. $-8(5w^2 + 7w + 2) - 7(-w^2 + 5w - 4)$

Subtracting Quadratic Expressions (J) Answers

Simplify each expression.

1. $8(-m^2 - 6m + 5) - (6m^2 - 7m - 5)$
 $-14m^2 - 41m + 45$

2. $(9d^2 + 9d + 7) - (7d^2 - 8d + 8)$
 $2d^2 + 17d - 1$

3. $(7w^2 - 6w - 2) - (-w^2 + 3w - 9)$
 $8w^2 - 9w + 7$

4. $8(3z^2 + z + 4) - (-2z^2 - 8z + 6)$
 $26z^2 + 16z + 26$

5. $(3t^2 - 2t + 5) - 3(t^2 - t - 4)$
 $t + 17$

6. $7(7t^2 + 3t + 8) - 5(-4t^2 - 2t + 8)$
 $69t^2 + 31t + 16$

7. $6(7p^2 + 8p + 9) - 7(-3p^2 + 3p + 8)$
 $63p^2 + 27p - 2$

8. $6(4f^2 - 5f - 4) - 2(-f^2 - 5f + 7)$
 $26f^2 - 20f - 38$

9. $(x^2 + 5x - 6) - (-3x^2 - x + 4)$
 $4x^2 + 6x - 10$

10. $-8(5w^2 + 7w + 2) - 7(-w^2 + 5w - 4)$
 $-33w^2 - 91w + 12$