

Adding Quadratic Expressions (A)

Simplify each expression.

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

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

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

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

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

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

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

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

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

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

Adding Quadratic Expressions (A) Answers

Simplify each expression.

1. $7(-7r^2 - 9r - 2) + 2(-2r^2 + 6r - 3)$
 $-53r^2 - 51r - 20$

2. $-4(-4f^2 + 3f - 8) + (-8f^2 - 4f - 9)$
 $8f^2 - 16f + 23$

3. $(-6b^2 + 6b - 2) + 4(-b^2 - 7b + 4)$
 $-10b^2 - 22b + 14$

4. $-(-9f^2 + f - 1) + (-5f^2 - 9f + 5)$
 $4f^2 - 10f + 6$

5. $8(2b^2 - 3b - 2) + (-2b^2 + 9b + 3)$
 $14b^2 - 15b - 13$

6. $(-5v^2 + 9v - 7) + 3(-3v^2 + 2v - 2)$
 $-14v^2 + 15v - 13$

7. $(-7b^2 - 2b + 5) + 3(2b^2 - 5b + 9)$
 $-b^2 - 17b + 32$

8. $(9v^2 + 2v - 4) + 7(3v^2 - 7v - 9)$
 $30v^2 - 47v - 67$

9. $-4(g^2 - 6g + 7) + 8(-7g^2 + 6g - 9)$
 $-60g^2 + 72g - 100$

10. $(2m^2 - m - 8) + (8m^2 + 4m - 5)$
 $10m^2 + 3m - 13$

Adding Quadratic Expressions (B)

Simplify each expression.

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

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

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

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

5. $(-2n^2 - 2n + 2) + (-8n^2 - 3n - 8)$

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

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

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

9. $-3(-9c^2 - 4c + 7) + 6(4c^2 + 8c - 5)$

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

Adding Quadratic Expressions (B) Answers

Simplify each expression.

1. $(-6h^2 - 4h - 5) + 7(-3h^2 - h - 5)$
 $-27h^2 - 11h - 40$

2. $7(-3g^2 - g + 3) + (-3g^2 + 8g - 5)$
 $-24g^2 + g + 16$

3. $-6(7v^2 - 6v - 2) + (-3v^2 - 8v - 3)$
 $-45v^2 + 28v + 9$

4. $(2k^2 - 2k - 8) + (9k^2 + 3k - 8)$
 $11k^2 + k - 16$

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

6. $6(3b^2 + b - 8) + (6b^2 - 8b + 7)$
 $24b^2 - 2b - 41$

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

8. $(-8w^2 - 5w - 8) + 4(-5w^2 - 8w - 5)$
 $-28w^2 - 37w - 28$

9. $-3(-9c^2 - 4c + 7) + 6(4c^2 + 8c - 5)$
 $51c^2 + 60c - 51$

10. $9(6z^2 - z + 4) + 9(5z^2 - 5z + 9)$
 $99z^2 - 54z + 117$

Adding Quadratic Expressions (C)

Simplify each expression.

1. $-6(3z^2 - 7z + 3) + (5z^2 - 9z + 5)$

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

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

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

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

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

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

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

9. $(-8m^2 + 8m - 4) + (-m^2 - 4m + 9)$

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

Adding Quadratic Expressions (C) Answers

Simplify each expression.

1. $-6(3z^2 - 7z + 3) + (5z^2 - 9z + 5)$
 $-13z^2 + 33z - 13$

2. $-3(5b^2 - 2b - 9) + 8(-4b^2 - 7b + 3)$
 $-47b^2 - 50b + 51$

3. $(5y^2 + 6y - 9) + (-5y^2 + 6y - 7)$
 $12y - 16$

4. $(2a^2 + a + 2) + 3(8a^2 - 7a + 1)$
 $26a^2 - 20a + 5$

5. $(-5m^2 - 7m - 9) + (4m^2 - 3m - 1)$
 $-m^2 - 10m - 10$

6. $-6(-z^2 - 3) + 4(-2z^2 + 5z + 5)$
 $-2z^2 + 20z + 38$

7. $(3k^2 + 8k - 2) + 9(-9k^2 + 6k + 7)$
 $-78k^2 + 62k + 61$

8. $(-4w^2 - 7w + 6) + 7(3w^2 + 8w + 7)$
 $17w^2 + 49w + 55$

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

10. $(7t^2 - 8t - 5) + 9(t^2 - 8t + 8)$
 $16t^2 - 80t + 67$

Adding Quadratic Expressions (D)

Simplify each expression.

1. $2(-9r^2 - 5r - 6) + (3r^2 - 2r - 7)$

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

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

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

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

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

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

8. $(7m^2 - 2m) + (-2m^2 - 3m - 2)$

9. $-4(-4d^2 - 2d + 4) + 9(d^2 + 9d + 9)$

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

Adding Quadratic Expressions (D) Answers

Simplify each expression.

1. $2(-9r^2 - 5r - 6) + (3r^2 - 2r - 7)$
 $-15r^2 - 12r - 19$

2. $3(-3r^2 + 6r + 6) + 4(5r^2 - r + 8)$
 $11r^2 + 14r + 50$

3. $4(c^2 + 5c - 8) + 8(6c^2 + 4c - 6)$
 $52c^2 + 52c - 80$

4. $(-9f^2 + 2f - 4) + (7f^2 + 6f + 5)$
 $-2f^2 + 8f + 1$

5. $(6b^2 - 4b - 5) + (9b^2 + 6b + 6)$
 $15b^2 + 2b + 1$

6. $-9(-2z^2 + 9z + 4) + (-z^2 + 3z - 3)$
 $17z^2 - 78z - 39$

7. $(4x^2 + 8x - 2) + (-7x^2 + 9x + 4)$
 $-3x^2 + 17x + 2$

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

9. $-4(-4d^2 - 2d + 4) + 9(d^2 + 9d + 9)$
 $25d^2 + 89d + 65$

10. $2(-7s^2 - 6s + 4) + 7(6s^2 + s - 2)$
 $28s^2 - 5s - 6$

Adding Quadratic Expressions (E)

Simplify each expression.

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

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

3. $(-9z^2 - 9z - 1) + (-3z^2 - 2)$

4. $(-4d^2 + d - 4) + 5(d^2 + 3d - 1)$

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

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

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

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

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

10. $(-6q^2 + 3q + 8) + 7(9q + 5)$

Adding Quadratic Expressions (E) Answers

Simplify each expression.

1. $(8h^2 + 6h - 8) + (5h^2 - 3h - 7)$
 $13h^2 + 3h - 15$

2. $-3(-4n^2 + 9n + 3) + (-5n^2 - 9n + 8)$
 $7n^2 - 36n - 1$

3. $(-9z^2 - 9z - 1) + (-3z^2 - 2)$
 $-12z^2 - 9z - 3$

4. $(-4d^2 + d - 4) + 5(d^2 + 3d - 1)$
 $d^2 + 16d - 9$

5. $6(2w^2 - 7w - 9) + (-7w^2 + w + 2)$
 $5w^2 - 41w - 52$

6. $-7(2z^2 + 5z + 8) + (9z^2 + 9z - 8)$
 $-5z^2 - 26z - 64$

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

8. $-8(2d^2 + 3d + 9) + 6(4d^2 - 9d + 9)$
 $8d^2 - 78d - 18$

9. $4(-5k^2 - k - 6) + 2(9k^2 - 2k - 1)$
 $-2k^2 - 8k - 26$

10. $(-6q^2 + 3q + 8) + 7(9q + 5)$
 $-6q^2 + 66q + 43$

Adding Quadratic Expressions (F)

Simplify each expression.

1. $(-5q^2 - 2q - 1) + (-9q^2 - 3q + 5)$

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

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

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

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

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

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

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

9. $(9c^2 - 3c + 5) + (-9c^2 - 9c - 1)$

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

Adding Quadratic Expressions (F) Answers

Simplify each expression.

1. $(-5q^2 - 2q - 1) + (-9q^2 - 3q + 5)$
 $-14q^2 - 5q + 4$

2. $(7s^2 - 2s + 4) + 6(-s^2 + 8s + 6)$
 $s^2 + 46s + 40$

3. $(7b^2 - 3b - 2) + 8(-8b^2 + 3b - 6)$
 $-57b^2 + 21b - 50$

4. $4(2r^2 + 6r + 3) + (6r^2 - r + 8)$
 $14r^2 + 23r + 20$

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

6. $(-9z^2 - 6z - 7) + 6(-6z^2 + 6z - 8)$
 $-45z^2 + 30z - 55$

7. $(7q^2 - 9q + 6) + (4q^2 + 6q - 3)$
 $11q^2 - 3q + 3$

8. $(-6d^2 - 3d - 8) + (-d^2 - 2d - 3)$
 $-7d^2 - 5d - 11$

9. $(9c^2 - 3c + 5) + (-9c^2 - 9c - 1)$
 $-12c + 4$

10. $-6(4y^2 + 4y - 8) + 8(-2y^2 - 6y - 7)$
 $-40y^2 - 72y - 8$

Adding Quadratic Expressions (G)

Simplify each expression.

1. $5(d^2 - d - 8) + 4(7d^2 + 7d + 8)$

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

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

4. $(9k + 5) + 4(k^2 + 5k + 7)$

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

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

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

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

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

10. $3(-3w^2 + 8w - 4) + (7w^2 - 8w - 3)$

Adding Quadratic Expressions (G) Answers

Simplify each expression.

1. $5(d^2 - d - 8) + 4(7d^2 + 7d + 8)$
 $33d^2 + 23d - 8$

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

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

4. $(9k + 5) + 4(k^2 + 5k + 7)$
 $4k^2 + 29k + 33$

5. $-(8w^2 - 9w + 2) + 2(9w^2 - 3w - 5)$
 $10w^2 + 3w - 12$

6. $-4(-3c^2 + 2c - 4) + (7c^2 + 7c + 2)$
 $19c^2 - c + 18$

7. $3(4n^2 - 6n + 9) + 5(-4n^2 - 6n - 4)$
 $-8n^2 - 48n + 7$

8. $(3q^2 + 8q + 8) + (-8q^2 + 9q - 1)$
 $-5q^2 + 17q + 7$

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

10. $3(-3w^2 + 8w - 4) + (7w^2 - 8w - 3)$
 $-2w^2 + 16w - 15$

Adding Quadratic Expressions (H)

Simplify each expression.

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

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

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

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

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

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

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

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

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

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

Adding Quadratic Expressions (H) Answers

Simplify each expression.

1. $-4(z^2 - 4z - 6) + 6(-z^2 + 6z - 9)$
 $-10z^2 + 52z - 30$

2. $8(-9n^2 + 7n + 4) + 4(2n^2 - 9n + 7)$
 $-64n^2 + 20n + 60$

3. $(4r^2 + 7r) + 4(-2r^2 + 2r + 6)$
 $-4r^2 + 15r + 24$

4. $9(-7p^2 + 7p - 7) + (-3p^2 - p + 5)$
 $-66p^2 + 62p - 58$

5. $-6(7b^2 - b - 3) + (3b^2 + 4b - 2)$
 $-39b^2 + 10b + 16$

6. $(8z^2 + 4z - 7) + 6(z^2 - 4z + 7)$
 $14z^2 - 20z + 35$

7. $-5(-8y^2 - 9y - 6) + (2y^2 - 9y - 5)$
 $42y^2 + 36y + 25$

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

9. $5(-3g^2 - 8g + 5) + (2g^2 + 7g - 7)$
 $-13g^2 - 33g + 18$

10. $(-5n^2 + 4n + 7) + (-4n^2 + 7n + 5)$
 $-9n^2 + 11n + 12$

Adding Quadratic Expressions (I)

Simplify each expression.

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

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

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

4. $-9(x^2 - 4x + 9) + (x^2 - x + 1)$

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

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

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

8. $(-4q^2 - 7q - 2) + 8(4q^2 - 7q + 8)$

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

10. $9(-p^2 + 4p - 7) + (-5p^2 - 7p + 6)$

Adding Quadratic Expressions (I) Answers

Simplify each expression.

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

2. $6(6v^2 + 8v - 7) + (-v^2 + 3v + 7)$
 $35v^2 + 51v - 35$

3. $8(-2w^2 - 6w + 4) + 7(-2w^2 + 3w + 9)$
 $-30w^2 - 27w + 95$

4. $-9(x^2 - 4x + 9) + (x^2 - x + 1)$
 $-8x^2 + 35x - 80$

5. $-(3q^2 + 5q + 2) + 8(5q^2 - 5q - 1)$
 $37q^2 - 45q - 10$

6. $(-4w^2 + 8w - 2) + (6w^2 + 6w - 6)$
 $2w^2 + 14w - 8$

7. $6(2f^2 - f - 4) + (-f^2 + 2f + 4)$
 $11f^2 - 4f - 20$

8. $(-4q^2 - 7q - 2) + 8(4q^2 - 7q + 8)$
 $28q^2 - 63q + 62$

9. $(-3z^2 + 4z - 9) + (-6z^2 + 7z + 1)$
 $-9z^2 + 11z - 8$

10. $9(-p^2 + 4p - 7) + (-5p^2 - 7p + 6)$
 $-14p^2 + 29p - 57$

Adding Quadratic Expressions (J)

Simplify each expression.

1. $-(-5f^2 + 4f - 4) + 4(-2f^2 - 3f + 3)$

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

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

4. $(-8a^2 + 6a - 5) + 4(-3a^2 - 3a + 9)$

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

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

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

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

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

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

Adding Quadratic Expressions (J) Answers

Simplify each expression.

1. $-(-5f^2 + 4f - 4) + 4(-2f^2 - 3f + 3)$
 $-3f^2 - 16f + 16$

2. $7(-4s^2 - s - 3) + 7(-4s^2 + 7s + 4)$
 $-56s^2 + 42s + 7$

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

4. $(-8a^2 + 6a - 5) + 4(-3a^2 - 3a + 9)$
 $-20a^2 - 6a + 31$

5. $(-9g^2 + 2g - 6) + 6(g^2 - 5g + 9)$
 $-3g^2 - 28g + 48$

6. $-4(d^2 - 3d + 2) + (5d^2 + 8d + 5)$
 $d^2 + 20d - 3$

7. $-4(4p^2 - 9p - 1) + (8p^2 + 5p - 9)$
 $-8p^2 + 41p - 5$

8. $(-5f^2 - 3f + 8) + 6(5f^2 + 5f - 8)$
 $25f^2 + 27f - 40$

9. $(-7h^2 - 7h - 5) + (-h^2 + 3h - 5)$
 $-8h^2 - 4h - 10$

10. $(-5x^2 - 5x + 6) + 6(-4x^2 - 8x - 4)$
 $-29x^2 - 53x - 18$