

Simplifying Quadratic Expressions (A)

Simplify each expression by combining like terms.

1. $-7 + 4 - 5x - 7x^2 + 6x + 9x + 6x + 6x^2$

2. $1 - 3a^2 + 8a + 4a - 6a + 9a^2 + 9 + 6a$

3. $-5t^2 + 5t^2 - 6 - 8 - 5t + 8t + 2t^2 + 8t^2$

4. $-r - 8r^2 + 6r + 6 + 3r^2 - 9r^2 + 9 - 8r^2$

5. $5w^2 - 1 + 7w + 2w^2 + 5w^2 - w - 6w^2 - 8w$

6. $-8 - 3 - 2p^2 + 2p^2 - 5p - 2 - 5p + 9p^2$

7. $8j^2 - 2j + j^2 + 1 + 7 + 2j + 5j^2 + j$

8. $-5k^2 - 7k^2 + 3k^2 - 3k^2 + 2k + 2k + 2k - 2k$

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

10. $3d^2 + 8 - 4d + 4d^2 + 7d^2 + 8d^2 + 2d^2 - 4d$

Simplifying Quadratic Expressions (A) Answers

Simplify each expression by combining like terms.

$$\begin{aligned} 1. & -7 + 4 - 5x - 7x^2 + 6x + 9x + 6x + 6x^2 \\ & = -x^2 + 16x - 3 \end{aligned}$$

$$\begin{aligned} 2. & 1 - 3a^2 + 8a + 4a - 6a + 9a^2 + 9 + 6a \\ & = 6a^2 + 12a + 10 \end{aligned}$$

$$\begin{aligned} 3. & -5t^2 + 5t^2 - 6 - 8 - 5t + 8t + 2t^2 + 8t^2 \\ & = 10t^2 + 3t - 14 \end{aligned}$$

$$\begin{aligned} 4. & -r - 8r^2 + 6r + 6 + 3r^2 - 9r^2 + 9 - 8r^2 \\ & = -22r^2 + 5r + 15 \end{aligned}$$

$$\begin{aligned} 5. & 5w^2 - 1 + 7w + 2w^2 + 5w^2 - w - 6w^2 - 8w \\ & = 6w^2 - 2w - 1 \end{aligned}$$

$$\begin{aligned} 6. & -8 - 3 - 2p^2 + 2p^2 - 5p - 2 - 5p + 9p^2 \\ & = 9p^2 - 10p - 13 \end{aligned}$$

$$\begin{aligned} 7. & 8j^2 - 2j + j^2 + 1 + 7 + 2j + 5j^2 + j \\ & = 14j^2 + j + 8 \end{aligned}$$

$$\begin{aligned} 8. & -5k^2 - 7k^2 + 3k^2 - 3k^2 + 2k + 2k + 2k - 2k \\ & = -12k^2 + 4k \end{aligned}$$

$$\begin{aligned} 9. & -8k^2 - 9 - 2k^2 + 6k + 9k^2 - k^2 - 3k - 7k \\ & = -2k^2 - 4k - 9 \end{aligned}$$

$$\begin{aligned} 10. & 3d^2 + 8 - 4d + 4d^2 + 7d^2 + 8d^2 + 2d^2 - 4d \\ & = 24d^2 - 8d + 8 \end{aligned}$$

Simplifying Quadratic Expressions (B)

Simplify each expression by combining like terms.

1. $7g^2 - 6g + 7 + 7 - 2 + 8g + 5g^2 - 3g$

2. $4x^2 - x + 8 - 4x + 9 - 7x^2 - 4x + 1$

3. $-6p + 7p^2 + 2p + 5 - 9p^2 - 8p^2 + 3 - 4$

4. $-6 + 3d^2 - d - 2d - 1 - 4d - d^2 + 4d^2$

5. $-3j^2 - 6 - 8j - 4 - 8j + 7j - 6j^2 + 7j^2$

6. $6q^2 + 1 - 5 - 9q^2 + 7 - 8q^2 + 5q - 5q$

7. $-9x + x^2 + 9x^2 - 7x^2 + 7x + 8x - 9x - 8x^2$

8. $6w^2 - 7w + 4 - 5w^2 - 4w^2 + 5w + 4w + 4w^2$

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

10. $-2g + 5g - 8g^2 + 3 + 5 + 6g^2 + 5 - g^2$

Simplifying Quadratic Expressions (B) Answers

Simplify each expression by combining like terms.

$$\begin{aligned} 1. & 7g^2 - 6g + 7 + 7 - 2 + 8g + 5g^2 - 3g \\ & = 12g^2 - g + 12 \end{aligned}$$

$$\begin{aligned} 2. & 4x^2 - x + 8 - 4x + 9 - 7x^2 - 4x + 1 \\ & = -3x^2 - 9x + 18 \end{aligned}$$

$$\begin{aligned} 3. & -6p + 7p^2 + 2p + 5 - 9p^2 - 8p^2 + 3 - 4 \\ & = -10p^2 - 4p + 4 \end{aligned}$$

$$\begin{aligned} 4. & -6 + 3d^2 - d - 2d - 1 - 4d - d^2 + 4d^2 \\ & = 6d^2 - 7d - 7 \end{aligned}$$

$$\begin{aligned} 5. & -3j^2 - 6 - 8j - 4 - 8j + 7j - 6j^2 + 7j^2 \\ & = -2j^2 - 9j - 10 \end{aligned}$$

$$\begin{aligned} 6. & 6q^2 + 1 - 5 - 9q^2 + 7 - 8q^2 + 5q - 5q \\ & = -11q^2 + 3 \end{aligned}$$

$$\begin{aligned} 7. & -9x + x^2 + 9x^2 - 7x^2 + 7x + 8x - 9x - 8x^2 \\ & = -5x^2 - 3x \end{aligned}$$

$$\begin{aligned} 8. & 6w^2 - 7w + 4 - 5w^2 - 4w^2 + 5w + 4w + 4w^2 \\ & = w^2 + 2w + 4 \end{aligned}$$

$$\begin{aligned} 9. & 6g - 7g - 4g^2 + 8g^2 - 7g - 8g^2 + 6 + 4 \\ & = -4g^2 - 8g + 10 \end{aligned}$$

$$\begin{aligned} 10. & -2g + 5g - 8g^2 + 3 + 5 + 6g^2 + 5 - g^2 \\ & = -3g^2 + 3g + 13 \end{aligned}$$

Simplifying Quadratic Expressions (C)

Simplify each expression by combining like terms.

1. $-4y^2 + y + 4y^2 + 3y^2 - 6 + 8y - 9y + 5y$

2. $-4g^2 - 1 + 4g - g + 7g^2 + 4g + 5 + 4g$

3. $3 - 5n - 5n^2 + 2n - 2n^2 - 8n - 5n - 4n^2$

4. $-z^2 + 5z + 4z^2 - 6z^2 - 8z - 4z - 9 + 8z^2$

5. $-2 - 4z - 9z^2 + 4 + 3z + 3z^2 + 7z^2 + 9z^2$

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

7. $5r - 4r^2 + 8 + 3r + 7r^2 + 6r^2 - r^2 - 6r^2$

8. $1 - 9m^2 - 3m^2 - 8 + m + 5m^2 - 4m^2 - 2$

9. $9j - 7j + 8 + 2j^2 + 3j^2 + 7j^2 - j - 6j^2$

10. $-2d + 9d + 2d^2 + 5d^2 - 4d^2 - 9d^2 + 8d^2 + 9$

Simplifying Quadratic Expressions (C) Answers

Simplify each expression by combining like terms.

$$\begin{aligned} 1. & -4y^2 + y + 4y^2 + 3y^2 - 6 + 8y - 9y + 5y \\ & = 3y^2 + 5y - 6 \end{aligned}$$

$$\begin{aligned} 2. & -4g^2 - 1 + 4g - g + 7g^2 + 4g + 5 + 4g \\ & = 3g^2 + 11g + 4 \end{aligned}$$

$$\begin{aligned} 3. & 3 - 5n - 5n^2 + 2n - 2n^2 - 8n - 5n - 4n^2 \\ & = -11n^2 - 16n + 3 \end{aligned}$$

$$\begin{aligned} 4. & -z^2 + 5z + 4z^2 - 6z^2 - 8z - 4z - 9 + 8z^2 \\ & = 5z^2 - 7z - 9 \end{aligned}$$

$$\begin{aligned} 5. & -2 - 4z - 9z^2 + 4 + 3z + 3z^2 + 7z^2 + 9z^2 \\ & = 10z^2 - z + 2 \end{aligned}$$

$$\begin{aligned} 6. & -3c^2 + 6 - c - 4c^2 + c^2 - c^2 - 5c^2 - 1 \\ & = -12c^2 - c + 5 \end{aligned}$$

$$\begin{aligned} 7. & 5r - 4r^2 + 8 + 3r + 7r^2 + 6r^2 - r^2 - 6r^2 \\ & = 2r^2 + 8r + 8 \end{aligned}$$

$$\begin{aligned} 8. & 1 - 9m^2 - 3m^2 - 8 + m + 5m^2 - 4m^2 - 2 \\ & = -11m^2 + m - 9 \end{aligned}$$

$$\begin{aligned} 9. & 9j - 7j + 8 + 2j^2 + 3j^2 + 7j^2 - j - 6j^2 \\ & = 6j^2 + j + 8 \end{aligned}$$

$$\begin{aligned} 10. & -2d + 9d + 2d^2 + 5d^2 - 4d^2 - 9d^2 + 8d^2 + 9 \\ & = 2d^2 + 7d + 9 \end{aligned}$$

Simplifying Quadratic Expressions (D)

Simplify each expression by combining like terms.

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

2. $6a^2 - 8 + 8 - 7a + 7a - 2a^2 + 2 - 1$

3. $3 + 6d^2 - 4d^2 - 7d^2 + d^2 - 4d^2 + 5d^2 - 8d$

4. $-6q - 2q^2 - 8 - 9q - 2q^2 - 4q^2 - 7q^2 + 6q$

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

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

7. $-5v^2 + 2v^2 + 3 + 2v^2 + 8v + 4v^2 + 6v^2 - 8v^2$

8. $-7t - 6t^2 + 4t^2 - 3 + 9t^2 + 7t^2 - 3 + 3t^2$

9. $8a^2 + 6a^2 - a + 1 - a + 5 - 2a - 7a^2$

10. $3s + 9 - 7s^2 + 7s^2 - 3s^2 + 4s^2 - 4s - 9s$

Simplifying Quadratic Expressions (D) Answers

Simplify each expression by combining like terms.

$$\begin{aligned} 1. \quad & 6c^2 + 7 + 6 - 2c^2 - 3c + 7 - 4c - 3 \\ & = 4c^2 - 7c + 17 \end{aligned}$$

$$\begin{aligned} 2. \quad & 6a^2 - 8 + 8 - 7a + 7a - 2a^2 + 2 - 1 \\ & = 4a^2 + 1 \end{aligned}$$

$$\begin{aligned} 3. \quad & 3 + 6d^2 - 4d^2 - 7d^2 + d^2 - 4d^2 + 5d^2 - 8d \\ & = -3d^2 - 8d + 3 \end{aligned}$$

$$\begin{aligned} 4. \quad & -6q - 2q^2 - 8 - 9q - 2q^2 - 4q^2 - 7q^2 + 6q \\ & = -15q^2 - 9q - 8 \end{aligned}$$

$$\begin{aligned} 5. \quad & -8 - 9k + k + 5k^2 + 6k^2 - 3k^2 - 7k^2 - 6k^2 \\ & = -5k^2 - 8k - 8 \end{aligned}$$

$$\begin{aligned} 6. \quad & 4c^2 - 8c^2 - 7 + 4c - 3c^2 + 4c - 6 - 7c \\ & = -7c^2 + c - 13 \end{aligned}$$

$$\begin{aligned} 7. \quad & -5v^2 + 2v^2 + 3 + 2v^2 + 8v + 4v^2 + 6v^2 - 8v^2 \\ & = v^2 + 8v + 3 \end{aligned}$$

$$\begin{aligned} 8. \quad & -7t - 6t^2 + 4t^2 - 3 + 9t^2 + 7t^2 - 3 + 3t^2 \\ & = 17t^2 - 7t - 6 \end{aligned}$$

$$\begin{aligned} 9. \quad & 8a^2 + 6a^2 - a + 1 - a + 5 - 2a - 7a^2 \\ & = 7a^2 - 4a + 6 \end{aligned}$$

$$\begin{aligned} 10. \quad & 3s + 9 - 7s^2 + 7s^2 - 3s^2 + 4s^2 - 4s - 9s \\ & = s^2 - 10s + 9 \end{aligned}$$

Simplifying Quadratic Expressions (E)

Simplify each expression by combining like terms.

1. $-7w + 2 - 2w^2 - 4 + 4w - 4 + 8w + 8w^2$

2. $-5s^2 + 9s + 3 + 3s^2 + 9s^2 + 2 + 8s^2 + 1$

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

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

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

6. $8 - 9 - 5 - 6t + 3 + 3t^2 - 4t^2 + 1$

7. $-6m^2 - m^2 - 9m^2 - 6m + 7 + 2m - 9m^2 - 7m^2$

8. $4j + 7j + 9 - 7j^2 - 5j^2 - 9 - 4 + 4j^2$

9. $2b^2 - 9 - 6b^2 - 5b^2 + 4 - 6 + 3b^2 + b^2$

10. $4 + 9v - 8v^2 - 5v^2 - 9v^2 - 7v^2 + 9v - 9v^2$

Simplifying Quadratic Expressions (E) Answers

Simplify each expression by combining like terms.

$$\begin{aligned} 1. & -7w + 2 - 2w^2 - 4 + 4w - 4 + 8w + 8w^2 \\ & = 6w^2 + 5w - 6 \end{aligned}$$

$$\begin{aligned} 2. & -5s^2 + 9s + 3 + 3s^2 + 9s^2 + 2 + 8s^2 + 1 \\ & = 15s^2 + 9s + 6 \end{aligned}$$

$$\begin{aligned} 3. & 7g + 5g - g^2 + 7g + 5 - 5 + 6g + 5g^2 \\ & = 4g^2 + 25g \end{aligned}$$

$$\begin{aligned} 4. & 8 + s^2 + 2s^2 + 9s^2 + 6s + 6 - 9s + 3s \\ & = 12s^2 + 14 \end{aligned}$$

$$\begin{aligned} 5. & -7r^2 - 3 + 7r - 5 + 6r - 3 + 1 - 7r^2 \\ & = -14r^2 + 13r - 10 \end{aligned}$$

$$\begin{aligned} 6. & 8 - 9 - 5 - 6t + 3 + 3t^2 - 4t^2 + 1 \\ & = -t^2 - 6t - 2 \end{aligned}$$

$$\begin{aligned} 7. & -6m^2 - m^2 - 9m^2 - 6m + 7 + 2m - 9m^2 - 7m^2 \\ & = -32m^2 - 4m + 7 \end{aligned}$$

$$\begin{aligned} 8. & 4j + 7j + 9 - 7j^2 - 5j^2 - 9 - 4 + 4j^2 \\ & = -8j^2 + 11j - 4 \end{aligned}$$

$$\begin{aligned} 9. & 2b^2 - 9 - 6b^2 - 5b^2 + 4 - 6 + 3b^2 + b^2 \\ & = -5b^2 - 11 \end{aligned}$$

$$\begin{aligned} 10. & 4 + 9v - 8v^2 - 5v^2 - 9v^2 - 7v^2 + 9v - 9v^2 \\ & = -38v^2 + 18v + 4 \end{aligned}$$

Simplifying Quadratic Expressions (F)

Simplify each expression by combining like terms.

1. $-5 + 2m^2 - 6m - 6m^2 + 9m^2 - 6 - 8m^2 + 7m$

2. $-m^2 - m - 5m^2 + 4m^2 + m^2 + 8m^2 - 6m^2 + 5m$

3. $9c - 7c + 9c^2 - 9c - 7c^2 - 5 + c + 4c$

4. $9t^2 - 8t + 2t^2 + t + 5 - 8 - 4 - 8$

5. $8v^2 + 2 - 6v - 9v - v + 1 + 5v^2 - 4$

6. $-5x^2 - 5 + x + 6x - 2x^2 + 4x^2 - 4x + x^2$

7. $7m^2 + 3m - 1 + 7m - m - 5m^2 - 7 - 3m^2$

8. $9x^2 + 3x^2 + 6x + 2 + 6x^2 + 2 - x^2 - 8x^2$

9. $-n + 2n^2 - 3n - 8n - 1 + 5n - 8n + 5$

10. $7c - 9c + 8c^2 - 3c^2 + c + 6c + 4c^2 + 4$

Simplifying Quadratic Expressions (F) Answers

Simplify each expression by combining like terms.

$$\begin{aligned} 1. & -5 + 2m^2 - 6m - 6m^2 + 9m^2 - 6 - 8m^2 + 7m \\ & = -3m^2 + m - 11 \end{aligned}$$

$$\begin{aligned} 2. & -m^2 - m - 5m^2 + 4m^2 + m^2 + 8m^2 - 6m^2 + 5m \\ & = m^2 + 4m \end{aligned}$$

$$\begin{aligned} 3. & 9c - 7c + 9c^2 - 9c - 7c^2 - 5 + c + 4c \\ & = 2c^2 - 2c - 5 \end{aligned}$$

$$\begin{aligned} 4. & 9t^2 - 8t + 2t^2 + t + 5 - 8 - 4 - 8 \\ & = 11t^2 - 7t - 15 \end{aligned}$$

$$\begin{aligned} 5. & 8v^2 + 2 - 6v - 9v - v + 1 + 5v^2 - 4 \\ & = 13v^2 - 16v - 1 \end{aligned}$$

$$\begin{aligned} 6. & -5x^2 - 5 + x + 6x - 2x^2 + 4x^2 - 4x + x^2 \\ & = -2x^2 + 3x - 5 \end{aligned}$$

$$\begin{aligned} 7. & 7m^2 + 3m - 1 + 7m - m - 5m^2 - 7 - 3m^2 \\ & = -m^2 + 9m - 8 \end{aligned}$$

$$\begin{aligned} 8. & 9x^2 + 3x^2 + 6x + 2 + 6x^2 + 2 - x^2 - 8x^2 \\ & = 9x^2 + 6x + 4 \end{aligned}$$

$$\begin{aligned} 9. & -n + 2n^2 - 3n - 8n - 1 + 5n - 8n + 5 \\ & = 2n^2 - 15n + 4 \end{aligned}$$

$$\begin{aligned} 10. & 7c - 9c + 8c^2 - 3c^2 + c + 6c + 4c^2 + 4 \\ & = 9c^2 + 5c + 4 \end{aligned}$$

Simplifying Quadratic Expressions (G)

Simplify each expression by combining like terms.

1. $-c^2 - 9 + 5c - 5c + 7 + 8c - 7 + 6c^2$

2. $y^2 - 7y^2 - 7y + 2y - 8y^2 - 2y + 9y + 8$

3. $4y + 2y + 3y + 3 + 2 - 3y^2 + 4y^2 + 7y^2$

4. $5y + 9y^2 + 6y^2 + 4 - 2 - 2y^2 + 9y - 3$

5. $1 - 5 - 8 + 8 - 4h^2 + 8h^2 + h + 5$

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

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

8. $4n^2 - n^2 + 4n - 3 - 3n^2 - 2n - 9 - n$

9. $-6 - 8 + 1 + 4g + 3g^2 + 7g^2 + 8g^2 - 9g$

10. $5y - 3y^2 - 6y^2 + 2y - 1 + 2y^2 - 4y^2 + 3y$

Simplifying Quadratic Expressions (G) Answers

Simplify each expression by combining like terms.

$$\begin{aligned} 1. & -c^2 - 9 + 5c - 5c + 7 + 8c - 7 + 6c^2 \\ & = 5c^2 + 8c - 9 \end{aligned}$$

$$\begin{aligned} 2. & y^2 - 7y^2 - 7y + 2y - 8y^2 - 2y + 9y + 8 \\ & = -14y^2 + 2y + 8 \end{aligned}$$

$$\begin{aligned} 3. & 4y + 2y + 3y + 3 + 2 - 3y^2 + 4y^2 + 7y^2 \\ & = 8y^2 + 9y + 5 \end{aligned}$$

$$\begin{aligned} 4. & 5y + 9y^2 + 6y^2 + 4 - 2 - 2y^2 + 9y - 3 \\ & = 13y^2 + 14y - 1 \end{aligned}$$

$$\begin{aligned} 5. & 1 - 5 - 8 + 8 - 4h^2 + 8h^2 + h + 5 \\ & = 4h^2 + h + 1 \end{aligned}$$

$$\begin{aligned} 6. & 7f + 6f + 8 + 8f^2 + 5f + 6f^2 - 4 + 7f^2 \\ & = 21f^2 + 18f + 4 \end{aligned}$$

$$\begin{aligned} 7. & 7t^2 + 9t + 9 - 3t^2 + 8 - 9t + 4 - 5t^2 \\ & = -t^2 + 21 \end{aligned}$$

$$\begin{aligned} 8. & 4n^2 - n^2 + 4n - 3 - 3n^2 - 2n - 9 - n \\ & = n - 12 \end{aligned}$$

$$\begin{aligned} 9. & -6 - 8 + 1 + 4g + 3g^2 + 7g^2 + 8g^2 - 9g \\ & = 18g^2 - 5g - 13 \end{aligned}$$

$$\begin{aligned} 10. & 5y - 3y^2 - 6y^2 + 2y - 1 + 2y^2 - 4y^2 + 3y \\ & = -11y^2 + 10y - 1 \end{aligned}$$

Simplifying Quadratic Expressions (H)

Simplify each expression by combining like terms.

1. $2 + 9h^2 + 2h^2 + 4h - 9 + 5 + 6 + 8$

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

3. $3m^2 - 6m + 1 + 2m^2 - 4m^2 + 2 - 9m^2 - 4m^2$

4. $-3 - 7v + 2v^2 - 2v^2 - v^2 + 3 - 2v^2 - 3$

5. $3f^2 + 3f - f^2 - 6f - 4f^2 + 4f + 9f - 4f^2$

6. $8w^2 + w - w - 8w^2 + 7w - 1 + 9w^2 + 3w$

7. $1 - 8h + 2 - 8h + 6h^2 - 4h^2 + 8h - 3h^2$

8. $8 + 5n + 6n + 8 - n^2 + 5n^2 + n^2 - 5n$

9. $4x^2 - 5 + 4x - 4x^2 - 7 - 3x - 3x^2 - 7x$

10. $y - 1 - 1 - 5y - 3y - y^2 - 7y - 4$

Simplifying Quadratic Expressions (H) Answers

Simplify each expression by combining like terms.

$$1. \quad 2 + 9h^2 + 2h^2 + 4h - 9 + 5 + 6 + 8 \\ = 11h^2 + 4h + 12$$

$$2. \quad -6w + 5w^2 - 4 - 6w^2 + 9w^2 + w + 8w + 5w \\ = 8w^2 + 8w - 4$$

$$3. \quad 3m^2 - 6m + 1 + 2m^2 - 4m^2 + 2 - 9m^2 - 4m^2 \\ = -12m^2 - 6m + 3$$

$$4. \quad -3 - 7v + 2v^2 - 2v^2 - v^2 + 3 - 2v^2 - 3 \\ = -3v^2 - 7v - 3$$

$$5. \quad 3f^2 + 3f - f^2 - 6f - 4f^2 + 4f + 9f - 4f^2 \\ = -6f^2 + 10f$$

$$6. \quad 8w^2 + w - w - 8w^2 + 7w - 1 + 9w^2 + 3w \\ = 9w^2 + 10w - 1$$

$$7. \quad 1 - 8h + 2 - 8h + 6h^2 - 4h^2 + 8h - 3h^2 \\ = -h^2 - 8h + 3$$

$$8. \quad 8 + 5n + 6n + 8 - n^2 + 5n^2 + n^2 - 5n \\ = 5n^2 + 6n + 16$$

$$9. \quad 4x^2 - 5 + 4x - 4x^2 - 7 - 3x - 3x^2 - 7x \\ = -3x^2 - 6x - 12$$

$$10. \quad y - 1 - 1 - 5y - 3y - y^2 - 7y - 4 \\ = -y^2 - 14y - 6$$

Simplifying Quadratic Expressions (I)

Simplify each expression by combining like terms.

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

2. $-2m^2 + 7 - 1 + 7 + 2m + 9m^2 + 2m^2 + 2m^2$

3. $-1 - 6w - 8w - 5w^2 - 5 + 2 + 3w + 9$

4. $9 + 5k + 9k^2 - 6k^2 + 9 - k + 2k + 7$

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

6. $-5x + 5x^2 - 2x + 5 + x^2 + 9x^2 + 5 + 2x^2$

7. $-7t^2 + 3t^2 - 2t^2 + 2 + 2t - 3 - 7t^2 - 4t^2$

8. $-7y - 7y - 3 + 8y^2 - 9y - 7y - 5y^2 - 7y$

9. $3j - 9j^2 + 9 + 1 - 7j^2 + j^2 + 1 + 7$

10. $-v + 2 + 5 - 7v^2 + 3v + 5v + 9v^2 - 8$

Simplifying Quadratic Expressions (I) Answers

Simplify each expression by combining like terms.

$$1. 8 - d - 2d^2 + 7d^2 + 3d^2 + 4d - 2d^2 - 8d^2 \\ = -2d^2 + 3d + 8$$

$$2. -2m^2 + 7 - 1 + 7 + 2m + 9m^2 + 2m^2 + 2m^2 \\ = 11m^2 + 2m + 13$$

$$3. -1 - 6w - 8w - 5w^2 - 5 + 2 + 3w + 9 \\ = -5w^2 - 11w + 5$$

$$4. 9 + 5k + 9k^2 - 6k^2 + 9 - k + 2k + 7 \\ = 3k^2 + 6k + 25$$

$$5. -3v + 5 + 4v + 6 + 2v^2 - 4v^2 + 7v + 2 \\ = -2v^2 + 8v + 13$$

$$6. -5x + 5x^2 - 2x + 5 + x^2 + 9x^2 + 5 + 2x^2 \\ = 17x^2 - 7x + 10$$

$$7. -7t^2 + 3t^2 - 2t^2 + 2 + 2t - 3 - 7t^2 - 4t^2 \\ = -17t^2 + 2t - 1$$

$$8. -7y - 7y - 3 + 8y^2 - 9y - 7y - 5y^2 - 7y \\ = 3y^2 - 37y - 3$$

$$9. 3j - 9j^2 + 9 + 1 - 7j^2 + j^2 + 1 + 7 \\ = -15j^2 + 3j + 18$$

$$10. -v + 2 + 5 - 7v^2 + 3v + 5v + 9v^2 - 8 \\ = 2v^2 + 7v - 1$$

Simplifying Quadratic Expressions (J)

Simplify each expression by combining like terms.

1. $5x^2 - 4 + 5x^2 - 3x^2 + 8x + 3x^2 - 5x + 3x$

2. $-7v^2 + 6v^2 + 4v^2 + 7v^2 + 8v - 9v^2 + 9v^2 + 9v^2$

3. $7 + 9m^2 - 7m + 9m + 1 - 6 + m^2 - 7m^2$

4. $-j^2 + 4j + 4j^2 - 7j + 6 - 6 + j + 5$

5. $-3n^2 - 8n - 4n^2 + 2 + 8 - 6n + 1 + 8n^2$

6. $-7b - b^2 + 7b^2 - 1 + 8 + 7 + 8b - b^2$

7. $-1 - 4 + 8 + 5 + 5j^2 + 8 - 9j^2 - 8$

8. $5 - 8j^2 + 6j - 6j - 5j + 9j^2 + j^2 - 5$

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

10. $-2q + 8q^2 - 4q^2 + 9q + 7 - 8q + 8 - 2$

Simplifying Quadratic Expressions (J) Answers

Simplify each expression by combining like terms.

$$1. 5x^2 - 4 + 5x^2 - 3x^2 + 8x + 3x^2 - 5x + 3x \\ = 10x^2 + 6x - 4$$

$$2. -7v^2 + 6v^2 + 4v^2 + 7v^2 + 8v - 9v^2 + 9v^2 + 9v^2 \\ = 19v^2 + 8v$$

$$3. 7 + 9m^2 - 7m + 9m + 1 - 6 + m^2 - 7m^2 \\ = 3m^2 + 2m + 2$$

$$4. -j^2 + 4j + 4j^2 - 7j + 6 - 6 + j + 5 \\ = 3j^2 - 2j + 5$$

$$5. -3n^2 - 8n - 4n^2 + 2 + 8 - 6n + 1 + 8n^2 \\ = n^2 - 14n + 11$$

$$6. -7b - b^2 + 7b^2 - 1 + 8 + 7 + 8b - b^2 \\ = 5b^2 + b + 14$$

$$7. -1 - 4 + 8 + 5 + 5j^2 + 8 - 9j^2 - 8 \\ = -4j^2 + 8$$

$$8. 5 - 8j^2 + 6j - 6j - 5j + 9j^2 + j^2 - 5 \\ = 2j^2 - 5j$$

$$9. -7k - 3k^2 - 3k^2 + 3 + 3 - 7 + 5 + 6k \\ = -6k^2 - k + 4$$

$$10. -2q + 8q^2 - 4q^2 + 9q + 7 - 8q + 8 - 2 \\ = 4q^2 - q + 13$$