

Simplifying Quadratic Expressions (A)

Simplify each expression by combining like terms.

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

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

$$3. 6 + 7z^2 + 2z - 3 - 8z^2 + 5z^2 - 6z^2$$

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

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

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

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

$$8. 9d^2 + 2 + 7d - 1 + 6 - 6d^2 + 9$$

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

$$10. -7s^2 + 7s + 4s^2 + 5s + 5s^2 - 9s - 3s$$

Simplifying Quadratic Expressions (A) Answers

Simplify each expression by combining like terms.

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

$$= -8w^2 - 2w + 1$$

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

$$= 11b^2 + 3b$$

$$3. 6 + 7z^2 + 2z - 3 - 8z^2 + 5z^2 - 6z^2$$

$$= -2z^2 + 2z + 3$$

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

$$= 3m^2 + m$$

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

$$= -14b^2 + 18$$

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

$$= 22q^2 - 11$$

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

$$= -5z^2 + 5z + 8$$

$$8. 9d^2 + 2 + 7d - 1 + 6 - 6d^2 + 9$$

$$= 3d^2 + 7d + 16$$

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

$$= 10s^2 - 2s + 14$$

$$10. -7s^2 + 7s + 4s^2 + 5s + 5s^2 - 9s - 3s$$

$$= 2s^2$$

Simplifying Quadratic Expressions (B)

Simplify each expression by combining like terms.

$$1. -5b^2 - 4b^2 - 7b + 3 - 6 - 6b - 7b$$

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

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

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

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

$$6. 2 + 2y^2 + 9 + 9y^2 + 9y - 2y - 9$$

$$7. 2m - 5m^2 - 7m^2 + 3m - 9m^2 - m^2 + 3m$$

$$8. -f^2 - 7f + 5 - 5f + 2f^2 - 9f^2 - 9f$$

$$9. q - 4 - 4q^2 - 8 - 4 - 5q^2 - q^2$$

$$10. 4z^2 - 9z^2 + 3z^2 - 4z + 6z^2 + 5z + 9z^2$$

Simplifying Quadratic Expressions (B) Answers

Simplify each expression by combining like terms.

$$1. -5b^2 - 4b^2 - 7b + 3 - 6 - 6b - 7b$$

$$= \color{red}{-9b^2 - 20b - 3}$$

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

$$= \color{red}{6s^2 - 2s + 14}$$

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

$$= \color{red}{26n^2 + 2n - 9}$$

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

$$= \color{red}{8j^2 + 4j - 4}$$

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

$$= \color{red}{9r^2 - 2r + 2}$$

$$6. 2 + 2y^2 + 9 + 9y^2 + 9y - 2y - 9$$

$$= \color{red}{11y^2 + 7y + 2}$$

$$7. 2m - 5m^2 - 7m^2 + 3m - 9m^2 - m^2 + 3m$$

$$= \color{red}{-22m^2 + 8m}$$

$$8. -f^2 - 7f + 5 - 5f + 2f^2 - 9f^2 - 9f$$

$$= \color{red}{-8f^2 - 21f + 5}$$

$$9. q - 4 - 4q^2 - 8 - 4 - 5q^2 - q^2$$

$$= \color{red}{-10q^2 + q - 16}$$

$$10. 4z^2 - 9z^2 + 3z^2 - 4z + 6z^2 + 5z + 9z^2$$

$$= \color{red}{13z^2 + z}$$

Simplifying Quadratic Expressions (C)

Simplify each expression by combining like terms.

$$1. \ 7s - 9 - s^2 + 6 - 5 - 3 - 3s$$

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

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

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

$$5. \ -5 - 9 - 2j - 4j^2 - 6j^2 - 2j + 8j^2$$

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

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

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

$$9. \ 7s^2 - 8s^2 - 8 + 9s - 2 - 3s^2 + 3$$

$$10. \ 4h - 4 - 9 + 8h^2 + 7h^2 + 4h + 6$$

Simplifying Quadratic Expressions (C) Answers

Simplify each expression by combining like terms.

$$\begin{aligned} 1. \quad & 7s - 9 - s^2 + 6 - 5 - 3 - 3s \\ & = -s^2 + 4s - 11 \end{aligned}$$

$$\begin{aligned} 2. \quad & -6m^2 + 4m + 6 + 6m + 2 - 6m - 5m^2 \\ & = -11m^2 + 4m + 8 \end{aligned}$$

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

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

$$\begin{aligned} 5. \quad & -5 - 9 - 2j - 4j^2 - 6j^2 - 2j + 8j^2 \\ & = -2j^2 - 4j - 14 \end{aligned}$$

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

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

$$\begin{aligned} 8. \quad & 5d^2 - 1 - 4d + 3d + 1 + 8d^2 + 9d^2 \\ & = 22d^2 - d \end{aligned}$$

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

$$\begin{aligned} 10. \quad & 4h - 4 - 9 + 8h^2 + 7h^2 + 4h + 6 \\ & = 15h^2 + 8h - 7 \end{aligned}$$

Simplifying Quadratic Expressions (D)

Simplify each expression by combining like terms.

$$1. -2p + p^2 + 6p^2 + 6p^2 - 2p - 8 - 8p^2$$

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

$$3. 7 + 3 - 8s - 6 - 2s^2 + 7s^2 + 3s^2$$

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

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

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

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

$$8. 8p^2 - 9p^2 - 1 - 9 - 3p + 4 - 3p$$

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

$$10. 5 - 2b^2 + 3b^2 + 9b + 2b^2 + 9b^2 - 4b$$

Simplifying Quadratic Expressions (D) Answers

Simplify each expression by combining like terms.

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

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

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

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

$$\begin{aligned} 5. \quad & 2n^2 - n^2 - 3n^2 + 5n - 8n^2 + 9 - 3n^2 \\ & = -13n^2 + 5n + 9 \end{aligned}$$

$$\begin{aligned} 6. \quad & 3p - 5 - 9p + 3p^2 - 8p - p^2 - 3p \\ & = 2p^2 - 17p - 5 \end{aligned}$$

$$\begin{aligned} 7. \quad & -8a^2 - 2a^2 + 1 - 7 + 2a^2 - 8a^2 + 6a^2 \\ & = -10a^2 - 6 \end{aligned}$$

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

$$\begin{aligned} 9. \quad & -3 + 1 - 5 + 4m^2 - 2m^2 + 8m^2 - 3 \\ & = 10m^2 - 10 \end{aligned}$$

$$\begin{aligned} 10. \quad & 5 - 2b^2 + 3b^2 + 9b + 2b^2 + 9b^2 - 4b \\ & = 12b^2 + 5b + 5 \end{aligned}$$

Simplifying Quadratic Expressions (E)

Simplify each expression by combining like terms.

$$1. -2b^2 - 2 + b^2 + 5 - 2b^2 + 2b^2 + 6$$

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

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

$$4. 7p - 4 + 7p^2 - 2 - 4p^2 + 3p^2 + 6$$

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

$$6. -2 - 7q^2 - 6q^2 + 7 + 5q - 2q^2 - 2$$

$$7. 7p + 5p + 2p^2 + 9p^2 + p - 4 + 9p^2$$

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

$$9. r^2 + 4r^2 + r - 9r^2 - r + 6r + 7r^2$$

$$10. 9k^2 + 4k - 5k + 8k^2 - 3k^2 + 5k - 3k^2$$

Simplifying Quadratic Expressions (E) Answers

Simplify each expression by combining like terms.

$$\begin{aligned} 1. \quad & -2b^2 - 2 + b^2 + 5 - 2b^2 + 2b^2 + 6 \\ & = -b^2 + 9 \end{aligned}$$

$$\begin{aligned} 2. \quad & 6h^2 + 5h^2 - 4h + 3 - 4h^2 + 9 - 5h^2 \\ & = 2h^2 - 4h + 12 \end{aligned}$$

$$\begin{aligned} 3. \quad & 8a + 5 - 5a^2 + 9a + 6a - a^2 - 5a^2 \\ & = -11a^2 + 23a + 5 \end{aligned}$$

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

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

$$\begin{aligned} 6. \quad & -2 - 7q^2 - 6q^2 + 7 + 5q - 2q^2 - 2 \\ & = -15q^2 + 5q + 3 \end{aligned}$$

$$\begin{aligned} 7. \quad & 7p + 5p + 2p^2 + 9p^2 + p - 4 + 9p^2 \\ & = 20p^2 + 13p - 4 \end{aligned}$$

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

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

$$\begin{aligned} 10. \quad & 9k^2 + 4k - 5k + 8k^2 - 3k^2 + 5k - 3k^2 \\ & = 11k^2 + 4k \end{aligned}$$

Simplifying Quadratic Expressions (F)

Simplify each expression by combining like terms.

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

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

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

$$4. 9q - 5q - 1 + 2q^2 + 2q^2 + 9q^2 - 5q$$

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

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

$$7. 4y - 8y - 7 - 6y - 2 + 4 - 7y^2$$

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

$$9. 2r^2 + 6 + 4 + 4r + 7r - 9r^2 + 1$$

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

Simplifying Quadratic Expressions (F) Answers

Simplify each expression by combining like terms.

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

$$= 18m^2 - 8m - 12$$

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

$$= -f^2 + 16f - 10$$

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

$$= 6s^2 + 17s - 1$$

$$4. 9q - 5q - 1 + 2q^2 + 2q^2 + 9q^2 - 5q$$

$$= 13q^2 - q - 1$$

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

$$= -c^2 - 10c - 14$$

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

$$= k^2 - 3k$$

$$7. 4y - 8y - 7 - 6y - 2 + 4 - 7y^2$$

$$= -7y^2 - 10y - 5$$

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

$$= -20j^2 + 15j$$

$$9. 2r^2 + 6 + 4 + 4r + 7r - 9r^2 + 1$$

$$= -7r^2 + 11r + 11$$

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

$$= -4t^2 + 8t - 21$$

Simplifying Quadratic Expressions (G)

Simplify each expression by combining like terms.

$$1. n^2 - 7n^2 - 7n + 5n^2 + 5n + 5n^2 - 5$$

$$2. 4 + 3x^2 + 5x^2 + 2 + 3 + 3x + 6x$$

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

$$4. 7 + 7p^2 - 1 + p^2 - 4p^2 - 3p + 4p^2$$

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

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

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

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

$$9. 8r - 5 + 7 - 8r^2 - 7 + 7r - r$$

$$10. h - 6 + 6 + 6h^2 + 8 - 2h^2 + 9$$

Simplifying Quadratic Expressions (G) Answers

Simplify each expression by combining like terms.

$$\begin{aligned} 1. \quad & n^2 - 7n^2 - 7n + 5n^2 + 5n + 5n^2 - 5 \\ & = 4n^2 - 2n - 5 \end{aligned}$$

$$\begin{aligned} 2. \quad & 4 + 3x^2 + 5x^2 + 2 + 3 + 3x + 6x \\ & = 8x^2 + 9x + 9 \end{aligned}$$

$$\begin{aligned} 3. \quad & -5 - 8a^2 + a^2 - 8a^2 - 8a^2 + 6a^2 - 2a \\ & = -17a^2 - 2a - 5 \end{aligned}$$

$$\begin{aligned} 4. \quad & 7 + 7p^2 - 1 + p^2 - 4p^2 - 3p + 4p^2 \\ & = 8p^2 - 3p + 6 \end{aligned}$$

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

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

$$\begin{aligned} 7. \quad & -1 + 8f - 5f^2 + 2 + 2f^2 + 8 - 5 \\ & = -3f^2 + 8f + 4 \end{aligned}$$

$$\begin{aligned} 8. \quad & -5v^2 - 6v - 9 + 4v^2 - 7v^2 - 7v^2 - 7 \\ & = -15v^2 - 6v - 16 \end{aligned}$$

$$\begin{aligned} 9. \quad & 8r - 5 + 7 - 8r^2 - 7 + 7r - r \\ & = -8r^2 + 14r - 5 \end{aligned}$$

$$\begin{aligned} 10. \quad & h - 6 + 6 + 6h^2 + 8 - 2h^2 + 9 \\ & = 4h^2 + h + 17 \end{aligned}$$

Simplifying Quadratic Expressions (H)

Simplify each expression by combining like terms.

$$1. \ 4d - 6d^2 - 6d^2 - 5d - 8d + 4d^2 - 4$$

$$2. \ -6t^2 - 3t - 7t^2 - 3t^2 + 7t^2 - 6t^2 - 4$$

$$3. \ c^2 + 8c^2 + 3c + 5c - 9 + 3c^2 + 3c^2$$

$$4. \ 5 + f^2 + f^2 - 3f - f^2 - 1 + f^2$$

$$5. \ -3 + 5 + 2x^2 + 3 + 9 + 5x - 8$$

$$6. \ -9w^2 - 7 - 4 - 4w - 6w^2 - 9w^2 - 2w^2$$

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

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

$$9. \ -9 + 8s^2 + 2s^2 + 2 + 2 - 6s^2 + 6s^2$$

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

Simplifying Quadratic Expressions (H) Answers

Simplify each expression by combining like terms.

$$1. \ 4d - 6d^2 - 6d^2 - 5d - 8d + 4d^2 - 4$$

$$= -8d^2 - 9d - 4$$

$$2. \ -6t^2 - 3t - 7t^2 - 3t^2 + 7t^2 - 6t^2 - 4$$

$$= -15t^2 - 3t - 4$$

$$3. \ c^2 + 8c^2 + 3c + 5c - 9 + 3c^2 + 3c^2$$

$$= 15c^2 + 8c - 9$$

$$4. \ 5 + f^2 + f^2 - 3f - f^2 - 1 + f^2$$

$$= 2f^2 - 3f + 4$$

$$5. \ -3 + 5 + 2x^2 + 3 + 9 + 5x - 8$$

$$= 2x^2 + 5x + 6$$

$$6. \ -9w^2 - 7 - 4 - 4w - 6w^2 - 9w^2 - 2w^2$$

$$= -26w^2 - 4w - 11$$

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

$$= 9v^2 - 5v$$

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

$$= -32p^2 + 7p$$

$$9. \ -9 + 8s^2 + 2s^2 + 2 + 2 - 6s^2 + 6s^2$$

$$= 10s^2 - 5$$

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

$$= 2g^2 - 2g - 2$$

Simplifying Quadratic Expressions (I)

Simplify each expression by combining like terms.

$$1. \ 8y^2 + y - 8y + 6y + 8y + 3 + 6y$$

$$2. \ -5g + 3g + 1 + 4g - 5g + 4g^2 - 4g^2$$

$$3. \ 8z + 9z^2 + z^2 + 8 - 7 - 3z^2 + 1$$

$$4. \ -7 + 6n^2 + 1 - 7 - 6n^2 + 3n + n^2$$

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

$$6. \ 2m^2 + 2m^2 + 4m^2 + 5m^2 + 4m^2 + 8m - 7m$$

$$7. \ -9m^2 - 3m^2 - 7m - 6m^2 + 6m^2 - 6 - 4m^2$$

$$8. \ -9r + 9r + 1 - 5r^2 - 8r^2 + r^2 + 5r$$

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

$$10. \ 1 + 5m + 6m^2 - 5m^2 + 7m^2 - 7m^2 + 7$$

Simplifying Quadratic Expressions (I) Answers

Simplify each expression by combining like terms.

$$1. \quad 8y^2 + y - 8y + 6y + 8y + 3 + 6y \\ = 8y^2 + 13y + 3$$

$$2. \quad -5g + 3g + 1 + 4g - 5g + 4g^2 - 4g^2 \\ = -3g + 1$$

$$3. \quad 8z + 9z^2 + z^2 + 8 - 7 - 3z^2 + 1 \\ = 7z^2 + 8z + 2$$

$$4. \quad -7 + 6n^2 + 1 - 7 - 6n^2 + 3n + n^2 \\ = n^2 + 3n - 13$$

$$5. \quad -3r^2 - 7r - r^2 - 6r^2 - r^2 + 2r + 8 \\ = -11r^2 - 5r + 8$$

$$6. \quad 2m^2 + 2m^2 + 4m^2 + 5m^2 + 4m^2 + 8m - 7m \\ = 17m^2 + m$$

$$7. \quad -9m^2 - 3m^2 - 7m - 6m^2 + 6m^2 - 6 - 4m^2 \\ = -16m^2 - 7m - 6$$

$$8. \quad -9r + 9r + 1 - 5r^2 - 8r^2 + r^2 + 5r \\ = -12r^2 + 5r + 1$$

$$9. \quad 3w + 1 + 8 + 2w - 3w^2 + 9w - 5w^2 \\ = -8w^2 + 14w + 9$$

$$10. \quad 1 + 5m + 6m^2 - 5m^2 + 7m^2 - 7m^2 + 7 \\ = m^2 + 5m + 8$$

Simplifying Quadratic Expressions (J)

Simplify each expression by combining like terms.

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

$$2. \ 7 + 9n^2 + 4n + n + 8n - 1 + 1$$

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

$$4. \ -9m^2 - 8m^2 + 5 + 9m^2 - 2 - 8m - 8$$

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

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

$$7. \ -9r^2 + 2r^2 + r^2 - 7r^2 - r^2 + 5 - 5$$

$$8. \ 6n^2 + 8n^2 + 8n^2 + 7 - 5 - 3n - 2n^2$$

$$9. \ 2p + 2 + 3p - 9p^2 + 5p^2 + 2 + 7$$

$$10. \ -7n^2 - 7n^2 + 4n - 9n^2 - 9n + 6n - 9n^2$$

Simplifying Quadratic Expressions (J) Answers

Simplify each expression by combining like terms.

$$1. \quad 4r^2 + 8 + 9r + 5r^2 - 3r + 2r^2 + 4 \\ = 11r^2 + 6r + 12$$

$$2. \quad 7 + 9n^2 + 4n + n + 8n - 1 + 1 \\ = 9n^2 + 13n + 7$$

$$3. \quad 8p + 3p^2 - 9p^2 - 4p^2 + 5p^2 - 5p^2 - 7 \\ = -10p^2 + 8p - 7$$

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

$$5. \quad 7v^2 + 5 - 7 + 6v - 3v^2 + 2 - v^2 \\ = 3v^2 + 6v$$

$$6. \quad -6 - 4z^2 + 8z^2 - 8 - 9 - 8 + 5 \\ = 4z^2 - 26$$

$$7. \quad -9r^2 + 2r^2 + r^2 - 7r^2 - r^2 + 5 - 5 \\ = -14r^2$$

$$8. \quad 6n^2 + 8n^2 + 8n^2 + 7 - 5 - 3n - 2n^2 \\ = 20n^2 - 3n + 2$$

$$9. \quad 2p + 2 + 3p - 9p^2 + 5p^2 + 2 + 7 \\ = -4p^2 + 5p + 11$$

$$10. \quad -7n^2 - 7n^2 + 4n - 9n^2 - 9n + 6n - 9n^2 \\ = -32n^2 + n$$