

Simplifying Quadratic Expressions (A)

Simplify each expression by combining like terms.

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

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

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

$$4. \ -2t - 2 - 3t^2 - 5t^2 + 5 + 8t^2 - 4t^2 - 2t^2 + 5t$$

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

$$6. \ 3 + 2 + 2c - 2c + 6c^2 + 5 - 8c^2 + 1 - 3c^2$$

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

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

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

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

Simplifying Quadratic Expressions (A) Answers

Simplify each expression by combining like terms.

$$\begin{aligned} 1. \quad & 3g^2 - 4g^2 + 4g + 8g - 5g^2 + g^2 + 5g^2 + 8g + 1 \\ & = 20g + 1 \end{aligned}$$

$$\begin{aligned} 2. \quad & -3d + 3d^2 + 6d^2 + 6d - 6d^2 + 8d + 9d^2 - 3d^2 - 4d^2 \\ & = 5d^2 + 11d \end{aligned}$$

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

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

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

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

$$\begin{aligned} 7. \quad & 3 + 2q^2 + 5 + 1 + 5q - 7q - 7 + 9q^2 + 9q^2 \\ & = 20q^2 - 2q + 2 \end{aligned}$$

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

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

$$\begin{aligned} 10. \quad & -6 + 3f + 3 + 4f - 6f - 3f^2 - 2f + 5f^2 - f^2 \\ & = f^2 - f - 3 \end{aligned}$$