

Simplifying Quadratic Expressions (C)

Simplify each expression by combining like terms.

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

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

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

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

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

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

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

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

9. $1 + 4 + 4f - 2f - 3f^2 - f^2 + 2f^2 + 7f - 3f^2$

10. $8 + 5n^2 + 3n - n^2 - 5n^2 - 5n - 7n^2 + 3n - 7$

Simplifying Quadratic Expressions (C) Answers

Simplify each expression by combining like terms.

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

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

$$\begin{aligned} 3. & 9z^2 + 7z^2 - 9z - 9 - 9z^2 + 6z^2 - 8 - 6z^2 - 7z \\ & = 7z^2 - 16z - 17 \end{aligned}$$

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

$$\begin{aligned} 5. & -5x - 3 + 4 - 4x^2 + 6x + 9x^2 + 5x - 8x + 9x^2 \\ & = 14x^2 - 2x + 1 \end{aligned}$$

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

$$\begin{aligned} 7. & 8j - 8j^2 + 9j^2 - 8 + 6 + 4j - 5 - 8 + 7j^2 \\ & = 8j^2 + 12j - 15 \end{aligned}$$

$$\begin{aligned} 8. & -5p + 3p^2 - 5p + 8 - 5p^2 - 9p^2 + 9p^2 + 4p^2 + 9 \\ & = 2p^2 - 10p + 17 \end{aligned}$$

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

$$\begin{aligned} 10. & 8 + 5n^2 + 3n - n^2 - 5n^2 - 5n - 7n^2 + 3n - 7 \\ & = -8n^2 + n + 1 \end{aligned}$$