

Simplifying Quadratic Expressions (D)

Simplify each expression by combining like terms.

1. $4q^2 - 5 + 8q + 3q^2 - 4 + 7q^2 - 4q + 7q + 7q^2 + 3q^2$

2. $9w^2 + 8w^2 + 1 + 9w^2 + 5w^2$

3. $-2z^2 + 7z - 3 + 4z^2 + 7z^2 - 8z - 4z^2 + z - 5$

4. $-1 - 7v^2 - 2v + 2v^2 + 4v^2$

5. $-1 + 9a - 9a^2 - 3a^2 + 5a^2$

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

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

8. $-b - 1 + 7b + 3b^2 + 8b - 5b^2 - 3$

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

10. $-4f - 9f^2 + 8f^2 + 3f^2 + 5f + 6 + 4 + 6f$

Simplifying Quadratic Expressions (D) Answers

Simplify each expression by combining like terms.

$$\begin{aligned} 1. & 4q^2 - 5 + 8q + 3q^2 - 4 + 7q^2 - 4q + 7q + 7q^2 + 3q^2 \\ & = 24q^2 + 11q - 9 \end{aligned}$$

$$\begin{aligned} 2. & 9w^2 + 8w^2 + 1 + 9w^2 + 5w^2 \\ & = 31w^2 + 1 \end{aligned}$$

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

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

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

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

$$\begin{aligned} 7. & 2 + h^2 - 9h^2 - 3h^2 + 5h - 7h - 4h + 6 \\ & = -11h^2 - 6h + 8 \end{aligned}$$

$$\begin{aligned} 8. & -b - 1 + 7b + 3b^2 + 8b - 5b^2 - 3 \\ & = -2b^2 + 14b - 4 \end{aligned}$$

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

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