

# Simplifying Quadratic Expressions (G)

Simplify each expression by combining like terms.

1.  $-9v - 3v + 8 + 3v^2 + 3 + 9v + 9v + 7v^2 - 3v^2$

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

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

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

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

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

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

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

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

10.  $-9t^2 - 2t^2 + 4t - 8t^2 + 7 + 3 + 6t - 5t + 8t$

# Simplifying Quadratic Expressions (G) Answers

Simplify each expression by combining like terms.

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

$$\begin{aligned} 2. & 1 + 3k^2 + 4k + 4k - 8 - 1 - 5k^2 + 5k^2 - 5 \\ & = 3k^2 + 8k - 13 \end{aligned}$$

$$\begin{aligned} 3. & -1 + 2z - 9 + 6z^2 + 5z^2 - 4z^2 + 4z - 2z - 4z^2 \\ & = 3z^2 + 4z - 10 \end{aligned}$$

$$\begin{aligned} 4. & -7j^2 - 4 + 5j^2 - 8j^2 - j^2 + 8j^2 - 7j - 3j - 7 \\ & = -3j^2 - 10j - 11 \end{aligned}$$

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

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

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

$$\begin{aligned} 8. & 6h^2 + 8h^2 + 9 - 7h - 8 + 8 + 3h^2 + 5 - 6h^2 \\ & = 11h^2 - 7h + 14 \end{aligned}$$

$$\begin{aligned} 9. & 9 + 4x^2 - 5 + 7 + 7 - 3x^2 + 5 + 6x^2 + 2 \\ & = 7x^2 + 25 \end{aligned}$$

$$\begin{aligned} 10. & -9t^2 - 2t^2 + 4t - 8t^2 + 7 + 3 + 6t - 5t + 8t \\ & = -19t^2 + 13t + 10 \end{aligned}$$