

Simplifying Quadratic Expressions (E)

Simplify each expression by combining like terms.

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

2. $4 - 7y - 4 + 8y - 9y^2 + 8y + 2y^2 - 6y + 2y^2 + 7$

3. $-2 - 9b^2 - 6b - 9b^2 + 4b^2 - 4b + 9b$

4. $4a^2 - 2 - 9a - 7 - 4a^2 - 9 - 5a^2 - 8a - 2a^2$

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

6. $f^2 + 8f + 6f + 6f^2 + 7f^2 + 5f^2 - 4f - 7$

7. $-h - 2h^2 + 7h^2 + 4h - 3h - h + 7h - 4h^2$

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

9. $v - 2v + 4 - 3v^2 - 9v - 6v^2 + v^2$

10. $1 + 4 + 6v - 6v^2 - v - v^2 + 1 + 8$

Simplifying Quadratic Expressions (E) Answers

Simplify each expression by combining like terms.

$$\begin{aligned} 1. & 7 - 6k^2 - k - 9 + 4k^2 + k - 9k - k - 6k \\ & = -2k^2 - 16k - 2 \end{aligned}$$

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

$$\begin{aligned} 3. & -2 - 9b^2 - 6b - 9b^2 + 4b^2 - 4b + 9b \\ & = -14b^2 - b - 2 \end{aligned}$$

$$\begin{aligned} 4. & 4a^2 - 2 - 9a - 7 - 4a^2 - 9 - 5a^2 - 8a - 2a^2 \\ & = -7a^2 - 17a - 18 \end{aligned}$$

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

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

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

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

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

$$\begin{aligned} 10. & 1 + 4 + 6v - 6v^2 - v - v^2 + 1 + 8 \\ & = -7v^2 + 5v + 14 \end{aligned}$$