

# Simplifying Quadratic Expressions (J)

Simplify each expression by combining like terms.

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

2.  $7 + 9n^2 + 4n + n + 8n - 1 + 1$

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

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

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

6.  $-6 - 4z^2 + 8z^2 - 8 - 9 - 8 + 5$

7.  $-9r^2 + 2r^2 + r^2 - 7r^2 - r^2 + 5 - 5$

8.  $6n^2 + 8n^2 + 8n^2 + 7 - 5 - 3n - 2n^2$

9.  $2p + 2 + 3p - 9p^2 + 5p^2 + 2 + 7$

10.  $-7n^2 - 7n^2 + 4n - 9n^2 - 9n + 6n - 9n^2$

# Simplifying Quadratic Expressions (J) Answers

Simplify each expression by combining like terms.

$$\begin{aligned} 1. & 4r^2 + 8 + 9r + 5r^2 - 3r + 2r^2 + 4 \\ & = 11r^2 + 6r + 12 \end{aligned}$$

$$\begin{aligned} 2. & 7 + 9n^2 + 4n + n + 8n - 1 + 1 \\ & = 9n^2 + 13n + 7 \end{aligned}$$

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

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

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

$$\begin{aligned} 6. & -6 - 4z^2 + 8z^2 - 8 - 9 - 8 + 5 \\ & = 4z^2 - 26 \end{aligned}$$

$$\begin{aligned} 7. & -9r^2 + 2r^2 + r^2 - 7r^2 - r^2 + 5 - 5 \\ & = -14r^2 \end{aligned}$$

$$\begin{aligned} 8. & 6n^2 + 8n^2 + 8n^2 + 7 - 5 - 3n - 2n^2 \\ & = 20n^2 - 3n + 2 \end{aligned}$$

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

$$\begin{aligned} 10. & -7n^2 - 7n^2 + 4n - 9n^2 - 9n + 6n - 9n^2 \\ & = -32n^2 + n \end{aligned}$$