

# Simplifying Quadratic Expressions (J)

Simplify each expression by combining like terms.

1.  $8k^2 - 8k^2 - 1 + 9 + 9$

2.  $-1 - 2n^2 + 1 - 4n - 3n^2 - 4 - 2n$

3.  $-9 - 5c^2 + 9c^2 - 7c^2 + 4c^2 + 9c^2 - 5c^2 - 3c^2$

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

5.  $6m^2 + 6m^2 - 4 - 1 + 7m^2 - 9m + m^2$

6.  $-7 + 8s^2 + 7s^2 + 9s + 4s - 9 + 3 + 4s$

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

8.  $8 + 6p^2 + 6p - 6p^2 - p^2 - 4 - p^2 - 9 - p$

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

10.  $5q + 5q + 7q^2 - 3q^2 + 7 + q^2 + 5$

# Simplifying Quadratic Expressions (J) Answers

Simplify each expression by combining like terms.

$$1. 8k^2 - 8k^2 - 1 + 9 + 9 \\ = 17$$

$$2. -1 - 2n^2 + 1 - 4n - 3n^2 - 4 - 2n \\ = -5n^2 - 6n - 4$$

$$3. -9 - 5c^2 + 9c^2 - 7c^2 + 4c^2 + 9c^2 - 5c^2 - 3c^2 \\ = 2c^2 - 9$$

$$4. -7k^2 - 6 + 9 - 3k^2 + 3k - 5 - 5 + 7 + 7k^2 \\ = -3k^2 + 3k$$

$$5. 6m^2 + 6m^2 - 4 - 1 + 7m^2 - 9m + m^2 \\ = 20m^2 - 9m - 5$$

$$6. -7 + 8s^2 + 7s^2 + 9s + 4s - 9 + 3 + 4s \\ = 15s^2 + 17s - 13$$

$$7. -9v + 5 + 5v^2 + 7 - v^2 - 8v^2 - 5v^2 + 6v^2 + 9v^2 + 3v^2 \\ = 9v^2 - 9v + 12$$

$$8. 8 + 6p^2 + 6p - 6p^2 - p^2 - 4 - p^2 - 9 - p \\ = -2p^2 + 5p - 5$$

$$9. -q^2 - 3q - 2q^2 + 3q^2 - 7q^2 - 9 - 4q + 6 - 9q \\ = -7q^2 - 16q - 3$$

$$10. 5q + 5q + 7q^2 - 3q^2 + 7 + q^2 + 5 \\ = 5q^2 + 10q + 12$$