

# Simplifying Quadratic Expressions (J)

Simplify each expression by combining like terms.

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

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

3.  $7 + 9m^2 - 7m + 9m + 1 - 6 + m^2 - 7m^2$

4.  $-j^2 + 4j + 4j^2 - 7j + 6 - 6 + j + 5$

5.  $-3n^2 - 8n - 4n^2 + 2 + 8 - 6n + 1 + 8n^2$

6.  $-7b - b^2 + 7b^2 - 1 + 8 + 7 + 8b - b^2$

7.  $-1 - 4 + 8 + 5 + 5j^2 + 8 - 9j^2 - 8$

8.  $5 - 8j^2 + 6j - 6j - 5j + 9j^2 + j^2 - 5$

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

10.  $-2q + 8q^2 - 4q^2 + 9q + 7 - 8q + 8 - 2$

# Simplifying Quadratic Expressions (J) Answers

Simplify each expression by combining like terms.

$$1. \quad 5x^2 - 4 + 5x^2 - 3x^2 + 8x + 3x^2 - 5x + 3x \\ = 10x^2 + 6x - 4$$

$$2. \quad -7v^2 + 6v^2 + 4v^2 + 7v^2 + 8v - 9v^2 + 9v^2 + 9v^2 \\ = 19v^2 + 8v$$

$$3. \quad 7 + 9m^2 - 7m + 9m + 1 - 6 + m^2 - 7m^2 \\ = 3m^2 + 2m + 2$$

$$4. \quad -j^2 + 4j + 4j^2 - 7j + 6 - 6 + j + 5 \\ = 3j^2 - 2j + 5$$

$$5. \quad -3n^2 - 8n - 4n^2 + 2 + 8 - 6n + 1 + 8n^2 \\ = n^2 - 14n + 11$$

$$6. \quad -7b - b^2 + 7b^2 - 1 + 8 + 7 + 8b - b^2 \\ = 5b^2 + b + 14$$

$$7. \quad -1 - 4 + 8 + 5 + 5j^2 + 8 - 9j^2 - 8 \\ = -4j^2 + 8$$

$$8. \quad 5 - 8j^2 + 6j - 6j - 5j + 9j^2 + j^2 - 5 \\ = 2j^2 - 5j$$

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

$$10. \quad -2q + 8q^2 - 4q^2 + 9q + 7 - 8q + 8 - 2 \\ = 4q^2 - q + 13$$