

## Simplifying Quadratic Expressions (E)

Simplify each expression by combining like terms.

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

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

3.  $-8p + 2p + 4 + 6p^2 - 5 - 4p^2 + 5 - 6p^2 - 5p^2$

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

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

6.  $6s^2 - s^2 - 2s^2 - 6s^2 - s + 2s + s^2 - 9s^2 + 5s^2$

7.  $-2 - 5r^2 - r - 1 - 2r + 4 + 5 - 2r^2 + 6r^2$

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

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

10.  $a - 5a + 5 - 2 + 3a^2 - 6a^2 + 8a^2 - 2 + 4a^2$

# Simplifying Quadratic Expressions (E) Answers

Simplify each expression by combining like terms.

$$1. 7x + 4 - 9x^2 - 6x^2 - 9x + 9 - 4x - 6 - 2x \\ = -15x^2 - 8x + 7$$

$$2. 7a^2 - 2a - 5a + 9a + 4a^2 + a + 7a - 9 + 7a \\ = 11a^2 + 17a - 9$$

$$3. -8p + 2p + 4 + 6p^2 - 5 - 4p^2 + 5 - 6p^2 - 5p^2 \\ = -9p^2 - 6p + 4$$

$$4. -3 - t - 4 + 8t + 7 - 5 - 4t^2 - t^2 - 9t^2 \\ = -14t^2 + 7t - 5$$

$$5. 9h - 3 - 2h^2 + 9h + 9h + 4 + 3h^2 + h + 4 \\ = h^2 + 28h + 5$$

$$6. 6s^2 - s^2 - 2s^2 - 6s^2 - s + 2s + s^2 - 9s^2 + 5s^2 \\ = -6s^2 + s$$

$$7. -2 - 5r^2 - r - 1 - 2r + 4 + 5 - 2r^2 + 6r^2 \\ = -r^2 - 3r + 6$$

$$8. 8 + v + 7 - 6v - 4v^2 + 4 + 3v^2 + 8v^2 - 2 \\ = 7v^2 - 5v + 17$$

$$9. 5s + 4s - 8s + 8 - 3s^2 - 8s^2 + 2s^2 - 7 - 7s \\ = -9s^2 - 6s + 1$$

$$10. a - 5a + 5 - 2 + 3a^2 - 6a^2 + 8a^2 - 2 + 4a^2 \\ = 9a^2 - 4a + 1$$