

# Simplifying Quadratic Expressions (H)

Simplify each expression by combining like terms.

1.  $2 + 9h^2 + 2h^2 + 4h - 9 + 5 + 6 + 8$

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

3.  $3m^2 - 6m + 1 + 2m^2 - 4m^2 + 2 - 9m^2 - 4m^2$

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

5.  $3f^2 + 3f - f^2 - 6f - 4f^2 + 4f + 9f - 4f^2$

6.  $8w^2 + w - w - 8w^2 + 7w - 1 + 9w^2 + 3w$

7.  $1 - 8h + 2 - 8h + 6h^2 - 4h^2 + 8h - 3h^2$

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

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

10.  $y - 1 - 1 - 5y - 3y - y^2 - 7y - 4$

# Simplifying Quadratic Expressions (H) Answers

Simplify each expression by combining like terms.

$$1. \quad 2 + 9h^2 + 2h^2 + 4h - 9 + 5 + 6 + 8 \\ = 11h^2 + 4h + 12$$

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

$$3. \quad 3m^2 - 6m + 1 + 2m^2 - 4m^2 + 2 - 9m^2 - 4m^2 \\ = -12m^2 - 6m + 3$$

$$4. \quad -3 - 7v + 2v^2 - 2v^2 - v^2 + 3 - 2v^2 - 3 \\ = -3v^2 - 7v - 3$$

$$5. \quad 3f^2 + 3f - f^2 - 6f - 4f^2 + 4f + 9f - 4f^2 \\ = -6f^2 + 10f$$

$$6. \quad 8w^2 + w - w - 8w^2 + 7w - 1 + 9w^2 + 3w \\ = 9w^2 + 10w - 1$$

$$7. \quad 1 - 8h + 2 - 8h + 6h^2 - 4h^2 + 8h - 3h^2 \\ = -h^2 - 8h + 3$$

$$8. \quad 8 + 5n + 6n + 8 - n^2 + 5n^2 + n^2 - 5n \\ = 5n^2 + 6n + 16$$

$$9. \quad 4x^2 - 5 + 4x - 4x^2 - 7 - 3x - 3x^2 - 7x \\ = -3x^2 - 6x - 12$$

$$10. \quad y - 1 - 1 - 5y - 3y - y^2 - 7y - 4 \\ = -y^2 - 14y - 6$$