

# Simplifying Quadratic Expressions (G)

Simplify each expression by combining like terms.

1.  $4a - 9a^2 + 4a - 9a^2 + 3a - 7a + 2a$

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

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

4.  $2a^2 - 7a^2 - 5 - a^2 + 3$

5.  $1 + 5g^2 - 6g^2 + g - 5 - 7g + 7$

6.  $-6h^2 + 9 + 9h^2 + 4h + h^2 + 4h - 4h + 1 - 5h + 3h^2$

7.  $-8c + 3 - 2c^2 - c - 3c$

8.  $6 + 5d^2 + d + 7d + 8d^2$

9.  $8c^2 - 7c - 8c^2 - 1 + 5c - 3c^2 + 4c^2 + 4 + 9$

10.  $-7h^2 + 9h + 8h^2 - 9h + 1 + 9h^2 - 8 + 9h + h^2$

# Simplifying Quadratic Expressions (G) Answers

Simplify each expression by combining like terms.

$$1. 4a - 9a^2 + 4a - 9a^2 + 3a - 7a + 2a \\ = -18a^2 + 6a$$

$$2. -4v^2 + 9 - 9v^2 + 9v - 8v + 2v^2 - 6v \\ = -11v^2 - 5v + 9$$

$$3. 4 - 2d^2 + 9d^2 + 9d^2 + 5d^2 - 6 + 4 - 6d \\ = 21d^2 - 6d + 2$$

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

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

$$6. -6h^2 + 9 + 9h^2 + 4h + h^2 + 4h - 4h + 1 - 5h + 3h^2 \\ = 7h^2 - h + 10$$

$$7. -8c + 3 - 2c^2 - c - 3c \\ = -2c^2 - 12c + 3$$

$$8. 6 + 5d^2 + d + 7d + 8d^2 \\ = 13d^2 + 8d + 6$$

$$9. 8c^2 - 7c - 8c^2 - 1 + 5c - 3c^2 + 4c^2 + 4 + 9 \\ = c^2 - 2c + 12$$

$$10. -7h^2 + 9h + 8h^2 - 9h + 1 + 9h^2 - 8 + 9h + h^2 \\ = 11h^2 + 9h - 7$$