

Simplifying Quadratic Expressions (F)

Simplify each expression by combining like terms.

1. $8q - 8q^2 - 9q^2 - q^2 + 7 + 2 + 5 - 6q^2 + 3q^2 + 7q^2$

2. $3 - 8j - 9j^2 + 2j + 6j + j^2 + j - 9j^2 - 2 - 6j^2$

3. $7c^2 + 8c - 5c^2 - 2 - 3c - 8c + 8 + c^2 - c^2 - 5$

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

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

6. $4n^2 + 1 + 9n^2 + 1 - 8n + 4 - 8n - 8 + 7n^2 + 9n$

7. $-1 + 8c^2 + 8c + c^2 + 8c^2 + 9c + 6c - c^2 + 8c^2 - 4c^2$

8. $-1 + 5h^2 - 3 - 8h^2 - h + 2h^2 + 9 + 2h^2 - h + h^2$

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

10. $6 - 6 - 8y^2 + 9 - 9y + 2 + 6 + 2y^2 + 5y^2 - y^2$

Simplifying Quadratic Expressions (F) Answers

Simplify each expression by combining like terms.

$$1. 8q - 8q^2 - 9q^2 - q^2 + 7 + 2 + 5 - 6q^2 + 3q^2 + 7q^2 \\ = -14q^2 + 8q + 14$$

$$2. 3 - 8j - 9j^2 + 2j + 6j + j^2 + j - 9j^2 - 2 - 6j^2 \\ = -23j^2 + j + 1$$

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

$$4. -8r^2 - 8r^2 - 8 + 8 - 7 + 9r^2 + 1 - 7r^2 - 4r + 5r \\ = -14r^2 + r - 6$$

$$5. 3b^2 + 1 + 5 - 7b^2 + 2 - 8b - 9b^2 + 5b^2 - 8 + 7b^2 \\ = -b^2 - 8b$$

$$6. 4n^2 + 1 + 9n^2 + 1 - 8n + 4 - 8n - 8 + 7n^2 + 9n \\ = 20n^2 - 7n - 2$$

$$7. -1 + 8c^2 + 8c + c^2 + 8c^2 + 9c + 6c - c^2 + 8c^2 - 4c^2 \\ = 20c^2 + 23c - 1$$

$$8. -1 + 5h^2 - 3 - 8h^2 - h + 2h^2 + 9 + 2h^2 - h + h^2 \\ = 2h^2 - 2h + 5$$

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

$$10. 6 - 6 - 8y^2 + 9 - 9y + 2 + 6 + 2y^2 + 5y^2 - y^2 \\ = -2y^2 - 9y + 17$$