

Simplifying Quadratic Expressions (G)

Simplify each expression by combining like terms.

1. $-4f^2 + 7f + 2 + 3f + 2f + f^2 + 6f + 1 - 5f^2 - 2$

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

3. $9 - 8d - 8d - 8 + d + 3d^2 + 5d^2 - 5d^2 + 3d^2 + 5d$

4. $4m - 5m^2 - 7 + 8m^2 + 8m + 2 + 8m^2 - 3m + 7m - 2m^2$

5. $-8 + 7p - 8 + 6p^2 - 4p^2 + 5 - p + p - 4p - 6$

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

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

8. $-6m - 6 + 9m - 7 - 2 - 6m^2 - 7m^2 + m + 8 - 1$

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

10. $-2x^2 + 3x^2 - 9x + 4x - 4x - 8 + 6x^2 + 4x^2 + 1 + 9x^2$

Simplifying Quadratic Expressions (G) Answers

Simplify each expression by combining like terms.

$$\begin{aligned} 1. & -4f^2 + 7f + 2 + 3f + 2f + f^2 + 6f + 1 - 5f^2 - 2 \\ & = -8f^2 + 18f + 1 \end{aligned}$$

$$\begin{aligned} 2. & -7 - 6j^2 + 9j + 2j^2 - 6j^2 + 3j^2 - 2 + 7j^2 + 5j^2 - 5j^2 \\ & = 9j - 9 \end{aligned}$$

$$\begin{aligned} 3. & 9 - 8d - 8d - 8 + d + 3d^2 + 5d^2 - 5d^2 + 3d^2 + 5d \\ & = 6d^2 - 10d + 1 \end{aligned}$$

$$\begin{aligned} 4. & 4m - 5m^2 - 7 + 8m^2 + 8m + 2 + 8m^2 - 3m + 7m - 2m^2 \\ & = 9m^2 + 16m - 5 \end{aligned}$$

$$\begin{aligned} 5. & -8 + 7p - 8 + 6p^2 - 4p^2 + 5 - p + p - 4p - 6 \\ & = 2p^2 + 3p - 17 \end{aligned}$$

$$\begin{aligned} 6. & -7h^2 - 8 - 7h^2 + 7h - 2h^2 - h - 4 - 1 + 6h - 6h \\ & = -16h^2 + 6h - 13 \end{aligned}$$

$$\begin{aligned} 7. & -7h^2 - 7h + 7h - 8h^2 + 2h + 4h^2 + h^2 - 4 + 2h - 3 \\ & = -10h^2 + 4h - 7 \end{aligned}$$

$$\begin{aligned} 8. & -6m - 6 + 9m - 7 - 2 - 6m^2 - 7m^2 + m + 8 - 1 \\ & = -13m^2 + 4m - 8 \end{aligned}$$

$$\begin{aligned} 9. & -1 - 3b^2 - 5b^2 + 6 + 9 - 3b^2 + 9 + 6b - 8 + 7b^2 \\ & = -4b^2 + 6b + 15 \end{aligned}$$

$$\begin{aligned} 10. & -2x^2 + 3x^2 - 9x + 4x - 4x - 8 + 6x^2 + 4x^2 + 1 + 9x^2 \\ & = 20x^2 - 9x - 7 \end{aligned}$$