

Simplifying Quadratic Expressions (H)

Simplify each expression by combining like terms.

1. $4 - 2f^2 + 9 + 2f + 2f + 8f$

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

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

4. $7 - 4d^2 - 4d^2 + 9 + 9d^2 - 2d^2$

5. $4 + 2w^2 - 8w + 3w^2 + 9w - 6w^2$

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

7. $-1 - n^2 - 4 + 3n^2 + 2 - 8n^2$

8. $-5m + 5m^2 + 1 + 5m + 3m + 4m^2$

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

10. $4 + 9c - 3 + 8 + 8 - 4c^2$

Simplifying Quadratic Expressions (H) Answers

Simplify each expression by combining like terms.

$$\begin{aligned} 1. & 4 - 2f^2 + 9 + 2f + 2f + 8f \\ & = -2f^2 + 12f + 13 \end{aligned}$$

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

$$\begin{aligned} 3. & 9 + 6h - h^2 + 5 + 6h + 9h \\ & = -h^2 + 21h + 14 \end{aligned}$$

$$\begin{aligned} 4. & 7 - 4d^2 - 4d^2 + 9 + 9d^2 - 2d^2 \\ & = -d^2 + 16 \end{aligned}$$

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

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

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

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

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

$$\begin{aligned} 10. & 4 + 9c - 3 + 8 + 8 - 4c^2 \\ & = -4c^2 + 9c + 17 \end{aligned}$$