

Simplifying Quadratic Expressions (H)

Simplify each expression by combining like terms.

1. $-7p - 8p + 2p^2 + 6p^2 - 5p - 7p^2 - 1 + 4p^2 + 8p^2$

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

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

4. $-3d^2 + 9d^2 - 4d^2 + 2d^2 + 2 + 7 + 2 + 3d - 4d$

5. $-3z^2 + 2 - 5 - 8z^2 + 8 + z^2 + 9 - 7 + 2z^2$

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

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

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

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

10. $6n + 3n^2 + 4n^2 + 9 - 7n^2 - 2 + 8n^2 - 6n^2 - 4n^2$

Simplifying Quadratic Expressions (H) Answers

Simplify each expression by combining like terms.

$$\begin{aligned} 1. & -7p - 8p + 2p^2 + 6p^2 - 5p - 7p^2 - 1 + 4p^2 + 8p^2 \\ & = 13p^2 - 20p - 1 \end{aligned}$$

$$\begin{aligned} 2. & -8h^2 + 5 - 8h^2 - 8h + 9h^2 + 1 - 4h - 3 + 3h^2 \\ & = -4h^2 - 12h + 3 \end{aligned}$$

$$\begin{aligned} 3. & 2x^2 + 2x^2 - 8x^2 + 9x^2 + 5 + 3x^2 + 9x^2 - 1 + 8 \\ & = 17x^2 + 12 \end{aligned}$$

$$\begin{aligned} 4. & -3d^2 + 9d^2 - 4d^2 + 2d^2 + 2 + 7 + 2 + 3d - 4d \\ & = 4d^2 - d + 11 \end{aligned}$$

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

$$\begin{aligned} 6. & 8h + 6h^2 + 9h^2 + 6h^2 - 9h^2 - 8h - 8 - 5 + 4h^2 \\ & = 16h^2 - 13 \end{aligned}$$

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

$$\begin{aligned} 8. & -5r^2 - 6r - 2r^2 + 7r^2 + 2r^2 + r^2 + 2r^2 + 5r^2 - 4r \\ & = 10r^2 - 10r \end{aligned}$$

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

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