

Simplifying Quadratic Expressions (A)

Simplify each expression by combining like terms.

1. $-7 + 4 - 5x - 7x^2 + 6x + 9x + 6x + 6x^2$

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

3. $-5t^2 + 5t^2 - 6 - 8 - 5t + 8t + 2t^2 + 8t^2$

4. $-r - 8r^2 + 6r + 6 + 3r^2 - 9r^2 + 9 - 8r^2$

5. $5w^2 - 1 + 7w + 2w^2 + 5w^2 - w - 6w^2 - 8w$

6. $-8 - 3 - 2p^2 + 2p^2 - 5p - 2 - 5p + 9p^2$

7. $8j^2 - 2j + j^2 + 1 + 7 + 2j + 5j^2 + j$

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

9. $-8k^2 - 9 - 2k^2 + 6k + 9k^2 - k^2 - 3k - 7k$

10. $3d^2 + 8 - 4d + 4d^2 + 7d^2 + 8d^2 + 2d^2 - 4d$

Simplifying Quadratic Expressions (A) Answers

Simplify each expression by combining like terms.

$$\begin{aligned} 1. & -7 + 4 - 5x - 7x^2 + 6x + 9x + 6x + 6x^2 \\ & = -x^2 + 16x - 3 \end{aligned}$$

$$\begin{aligned} 2. & 1 - 3a^2 + 8a + 4a - 6a + 9a^2 + 9 + 6a \\ & = 6a^2 + 12a + 10 \end{aligned}$$

$$\begin{aligned} 3. & -5t^2 + 5t^2 - 6 - 8 - 5t + 8t + 2t^2 + 8t^2 \\ & = 10t^2 + 3t - 14 \end{aligned}$$

$$\begin{aligned} 4. & -r - 8r^2 + 6r + 6 + 3r^2 - 9r^2 + 9 - 8r^2 \\ & = -22r^2 + 5r + 15 \end{aligned}$$

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

$$\begin{aligned} 6. & -8 - 3 - 2p^2 + 2p^2 - 5p - 2 - 5p + 9p^2 \\ & = 9p^2 - 10p - 13 \end{aligned}$$

$$\begin{aligned} 7. & 8j^2 - 2j + j^2 + 1 + 7 + 2j + 5j^2 + j \\ & = 14j^2 + j + 8 \end{aligned}$$

$$\begin{aligned} 8. & -5k^2 - 7k^2 + 3k^2 - 3k^2 + 2k + 2k + 2k - 2k \\ & = -12k^2 + 4k \end{aligned}$$

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

$$\begin{aligned} 10. & 3d^2 + 8 - 4d + 4d^2 + 7d^2 + 8d^2 + 2d^2 - 4d \\ & = 24d^2 - 8d + 8 \end{aligned}$$