

Simplifying Quadratic Expressions (F)

Simplify each expression by combining like terms.

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

$$2. \ 3h^2 + 6h^2 + 2 + 4h - 8h + 7h + 6h^2 - 3h - 1$$

$$3. \ -4 - 7j^2 - 9j^2 + 7j + 1 - 2 + 6j + 2 - 2$$

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

$$5. \ -r^2 - 2 + 4r^2 + 6r^2 - 9 + 9r^2 + 6r + 4r^2 - 6r$$

$$6. \ 5v + 9v^2 + 7v + 8v + 4 + 2 - 3 - 8v + 8$$

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

$$8. \ -9p^2 + p^2 - 9 + 4p - 1 + 8 - 2 + 2p^2 - 2p^2$$

$$9. \ -9v + 6v^2 - 9v^2 - v + v^2 + 5 - 3v^2 + 6 - 3$$

$$10. \ -r + 3 + 2r - 3r^2 + 8 - 9r^2 - 4r^2 + 8r + 4r^2$$

Simplifying Quadratic Expressions (F) Answers

Simplify each expression by combining like terms.

$$\begin{aligned} 1. \quad & 9s^2 + s^2 + 8s^2 - 5s + 5s + 6s - 6s^2 - 7s + 3s \\ & = 12s^2 + 2s \end{aligned}$$

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

$$\begin{aligned} 3. \quad & -4 - 7j^2 - 9j^2 + 7j + 1 - 2 + 6j + 2 - 2 \\ & = -16j^2 + 13j - 5 \end{aligned}$$

$$\begin{aligned} 4. \quad & -9p + 3p^2 + 6p^2 + 9p^2 - 5p^2 + 5p - 5p - 8p + p \\ & = 13p^2 - 16p \end{aligned}$$

$$\begin{aligned} 5. \quad & -r^2 - 2 + 4r^2 + 6r^2 - 9 + 9r^2 + 6r + 4r^2 - 6r \\ & = 22r^2 - 11 \end{aligned}$$

$$\begin{aligned} 6. \quad & 5v + 9v^2 + 7v + 8v + 4 + 2 - 3 - 8v + 8 \\ & = 9v^2 + 12v + 11 \end{aligned}$$

$$\begin{aligned} 7. \quad & -5n - 8 + 2n^2 - 1 + 6n^2 + 2n - n + 7n^2 + 9n^2 \\ & = 24n^2 - 4n - 9 \end{aligned}$$

$$\begin{aligned} 8. \quad & -9p^2 + p^2 - 9 + 4p - 1 + 8 - 2 + 2p^2 - 2p^2 \\ & = -8p^2 + 4p - 4 \end{aligned}$$

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

$$\begin{aligned} 10. \quad & -r + 3 + 2r - 3r^2 + 8 - 9r^2 - 4r^2 + 8r + 4r^2 \\ & = -12r^2 + 9r + 11 \end{aligned}$$