Simplifying Quadratic Expressions (I)

Simplify each expression by combining like terms.

1. $6z^2 - 8z - 4z^2 - 5 + 7z^2 - 3 + 7z - 4 + 9 - 9z^2$

2. $9a - 7a + 3a + 5a^2 + 4a^2 + 4 - 4a - 7a - 4a^2 - 6$

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

4. $6y + y - 9y - 8y + 2y^2 - 7y + 1 + 4y^2 + 9y^2 - 8y^2$

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

6. $-9f - 4f^2 + f^2 + 8f^2 + 5 - 9f^2 - 4f^2 - 8f^2 + 5 + 1$

7. $8b - 4b^2 - 4 - 5b + b^2 + b^2 + 3b^2 - 6b + 8 + 3b$

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

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

10. $5 - 3w^2 - w + 7w - 4w^2 + 7w^2 + 3w^2 + 9w - w^2 - 4$

Simplifying Quadratic Expressions (I) Answers

Simplify each expression by combining like terms.

1. $6z^2 - 8z - 4z^2 - 5 + 7z^2 - 3 + 7z - 4 + 9 - 9z^2$
   $= -z - 3$

2. $9a - 7a + 3a + 5a^2 + 4a^2 + 4 - 4a - 7a - 4a^2 - 6$
   $= 5a^2 - 6a - 2$

3. $4v^2 - 2 + 9v^2 + 6v^2 + 4 - 4v - v^2 + 7v + 3v + 3$
   $= 18v^2 + 6v + 5$

4. $6y + y - 9y - 8y + 2y^2 - 7y + 1 + 4y^2 + 9y^2 - 8y^2$
   $= 7y^2 - 17y + 1$

5. $8z - 5z + 3 + 9z^2 + 6z^2 - 3z - 8z^2 + 5z^2 + 4z - 5z$
   $= 12z^2 - z + 3$

6. $-9f - 4f^2 + f^2 + 8f^2 + 5 - 9f^2 - 4f^2 - 8f^2 + 5 + 1$
   $= -16f^2 - 9f + 11$

7. $8b - 4b^2 - 4 - 5b + b^2 + b^2 + 3b^2 - 6b + 8 + 3b$
   $= b^2 + 4$

8. $5z^2 - 8z + 3z^2 + 6z^2 + 8 + 5z^2 - 5z - 9z^2 + 7z + z^2$
   $= 11z^2 - 6z + 8$

9. $9 + 3 + 5 + 6b + 9b^2 - 1 + 9b^2 - b - 6b^2 - 7$
   $= 12b^2 + 5b + 9$

10. $5 - 3w^2 - w + 7w - 4w^2 + 7w^2 + 3w^2 + 9w - w^2 - 4$
    $= 2w^2 + 15w + 1$