Simplifying Quadratic Expressions (A)

Simplify each expression by combining like terms.

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

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

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

4. $-2t - 2 - 3t^2 - 5t^2 + 5 + 8t^2 - 4t^2 - 2t^2 + 5t$

5. $-4j - 2 + 3j^2 + 4j - 7j + j^2 - 2 + 7j^2 - 7j^2$

6. $3 + 2 + 2c - 2c + 6c^2 + 5 - 8c^2 + 1 - 3c^2$

7. $3 + 2q^2 + 5 + 1 + 5q - 7q - 7 + 9q^2 + 9q^2$

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

9. $-6 + 4 + 2 + x^2 + 2x^2 - x^2 - 5x^2 - 3 - 3x$

10. $-6 + 3f + 3 + 4f - 6f - 3f^2 - 2f + 5f^2 - f^2$

Simplify each expression by combining like terms.

1. $3g^2 - 4g^2 + 4g + 8g - 5g^2 + g^2 + 5g^2 + 8g + 1$
   $= 20g + 1$

2. $-3d + 3d^2 + 6d^2 + 6d - 6d^2 + 8d + 9d^2 - 3d^2 - 4d^2$
   $= 5d^2 + 11d$

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

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

5. $-4j - 2 + 3j^2 + 4j - 7j + j^2 - 2 + 7j^2 - 7j^2$
   $= 4j^2 - 7j - 4$

6. $3 + 2 + 2c - 2c + 6c^2 + 5 - 8c^2 + 1 - 3c^2$
   $= -5c^2 + 11$

7. $3 + 2q^2 + 5 + 1 + 5q - 7q - 7 + 9q^2 + 9q^2$
   $= 20q^2 - 2q + 2$

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

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

10. $-6 + 3f + 3 + 4f - 6f - 3f^2 - 2f + 5f^2 - f^2$
    $= f^2 - f - 3$