Additional Problems: Quadratic Equations

**Features of Graphs of Quadratic Equations**

1. Determine the zeros of the quadratic function y = x^2 + 7x + 10. (When listing the smaller zero, remember that negative values are always smaller than positive values.)
2. Determine the zeros of the quadratic function y = x^2 - 4x - 5. (When listing the smaller zero, remember that negative values are always smaller than positive values.)
3. What point is symmetrical to (-2, 5) for the graph of y = x^2 + 6x + 9?
4. What point is symmetrical to (3, -4) for the graph of y = x^2 - 8x + 15?
5. Complete the square to identify the vertex of y = x^2 - 10x + 21.
   1. (5, -4)
   2. (5, 4)
   3. (5, -25)
   4. (5, 21)
6. Complete the square to identify the vertex of y = x^2 + 6x - 1.
   1. (-3, -10)
   2. (-3, 8)
   3. (-3, -1)
   4. (-3, 5)
7. Identify the vertex of y = -5(x - 8)^2 + 12.
   1. (-5, 8)
   2. (8, 12)
   3. (-8, 12)
   4. (8, -12)
8. Identify the vertex of y = 3(x + 4)^2 – 7.
   1. (-4, -7)
   2. (4, -7)
   3. (-4, 7)
   4. (4, 7)
9. What point is symmetrical to (2, -5) for the graph of y = -x^2 + 3?
   1. (-2, -5)
   2. (2, 5)
   3. (-2, 5)
   4. (5, -2)
10. What point is symmetrical to \((-3, 10)\) for the graph of y = x^2 – 4?
    1. (3, 10)
    2. (-10, -3)
    3. (3, -10)
    4. (-3, -10)