Additional Problems: Quadratic Equations

**Solving Quadratic Equations Using Patterns**

1. Supply the numbers to write (x^2 + 8x + 15 = 0) in its factored form. Enter the lesser number first.
2. Supply the numbers to write (x^2 + 12x + 35 = 0) in its factored form. Enter the lesser number first.
3. Supply the number in the blank so that the quadratic equation below has 3 and 7 as its solutions: x^2 – 10x + \_\_\_\_\_ = 0
4. Supply the number in the blank so that the quadratic equation below has 5 and 9 as its solutions: x^2 – 14x + \_\_\_\_\_ = 0
5. Solve the following quadratic equation using the perfect square trinomial pattern: x^2 + 12x + 36 = 0
6. Solve the following quadratic equation using the perfect square trinomial pattern: x^2 - 6x + 9 = 0
7. The quadratic equation x^2 + 6x - 27 = 0 can be solved by factoring. Which of the following is the factored form?
   1. (x + 9)(x - 3) = 0)
   2. (x - 9)(x + 3) = 0)
   3. (x + 3)(x + 9) = 0)
   4. (x - 3)(x - 9) = 0)
8. The quadratic equation x^2 - 5x - 24 = 0 can be solved by factoring. Which of the following is the factored form?
   1. (x + 3)(x - 8) = 0
   2. (x - 3)(x + 8) = 0
   3. (x + 8)(x - 3) = 0
   4. (x - 8)(x + 3) = 0
9. Solve the following quadratic equation using the perfect square trinomial pattern: x^2 - 14x + 49 = 0
   1. x = -49
   2. x = -7
   3. x = 7
   4. x = 49
10. Solve the following quadratic equation using the perfect square trinomial pattern: x^2 + 12x + 36 = 0
    1. x = -36
    2. x = -6
    3. x = 6
    4. x = 36