~Solve by Completing the Square Notes~

**MCC9-12.A.REI.4b: I can solve by completing the square.**

* **Perfect Square Trinomials**

Examples:

* x2 + 6x + 9
* x2 - 10x + 25
* x2 + 12x + 36
* **Creating a Perfect Square Trinomial**
  + In the following perfect square trinomial, the \_\_\_\_\_\_\_\_\_\_\_\_\_ term is missing. X2 + 14x + \_\_\_\_
  + Find the \_\_\_\_\_\_\_\_\_\_\_\_\_ term by \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_ the coefficient of the linear term.
  + (14/2)2
  + **X2 + 14x + 49**
* **Create perfect square trinomials**
  + x2 + 20x + \_\_\_
  + x2 - 4x + \_\_\_
  + x2 + 5x + \_\_\_

**Solving Quadratic Equations by Completing the Square Example #1**

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| Solve the following equation by completing the square: |  |
| **Step 1:** Move \_\_\_\_\_\_\_\_\_\_\_\_\_\_ term, and \_\_\_\_\_\_\_\_\_\_ term to left side of the equation. |  |
| **Step 2:**  Find the \_\_\_\_\_\_\_ that completes the \_\_\_\_\_\_\_\_\_on the \_\_\_\_\_\_ side of the equation. \_\_\_\_\_\_\_\_ that term to \_\_\_\_\_\_\_ sides. |  |
| **Step 3:** \_\_\_\_\_\_\_\_\_\_\_ the \_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ trinomial on the \_\_\_\_\_\_ side of the equation. \_\_\_\_\_\_\_\_\_\_ the \_\_\_\_\_\_\_ side of the equation**.** |  |
| **Step 4:** Take the \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_ of each side |  |
| **Step 5:**  Set up the \_\_\_\_\_\_\_ possibilities and \_\_\_\_\_\_\_. |  |

Now you try!

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|  | 3. x2 – 5x – 24 = 0 |
|  | |

Answers: (Answers are not in order).

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