Day 9: Finding The Vertex of a Parabola DATE:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Sometimes we are given the quadratic function in the form  . This is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. We need to convert it to the form  to identify the \_\_\_\_\_\_\_\_\_\_. The method we use is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Find the value of “c” that will make each expression a perfect square trinomial. Remember a perfect square trinomial is in the form \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

  

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| **Steps** | **Example #1**  **y = x2 – 6x + 5** | **Example #2**  **y = x2 – 2x + 1** |
| Common factor the coefficient of the x2 term from the first two terms. Do not factor out the x. |  |  |
| Divide the coefficient of x by 2, then square it. |  |  |
| Add and subtract that value inside the bracket of the equation two steps above. |  |  |
| Move the last term in the bracket to the outside of the bracket and multiply it with the number in front of the bracket. Add the two constants together. |  |  |
| Factor the perfect square trinomial inside the bracket. |  |  |
|  |  |  |

1. Convert  to the form  and state its vertex.
2. Convert  to the form  and state its vertex
3. Convert  to the form  and state its vertex

Homework: p. 270 #3beg, 4ac, 6a, 7ace, 8bc, 19