

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Factor Notes

Standard Form of a Quadratic:  $y = ax^2 + bx + c$

The a, b, and c of the Standard Form are always: NUMBERS

We have change from Standard Form to the Vertex Form:  $y = a(x - h)^2 + k$  by Completing the Square or using the  $x = -\frac{b}{2a}$  to find the vertex.

To factor an expression means we will change it from Standard Form to the Factored Form:

$$y = a(x - p)(x - q)$$

### Steps to Factor an Expression

1. Identify the a, b, and c
2. Find the product ac
3. Find all the factor pairs of ac
4. Circle the pair that adds or subtracts to b.
5. Use either Box or Parenthesis Method to rewrite the expression.
6. Factor.
7. Rewrite.

Example:  $x^2 + 6x + 5$

Example:  $x^2 - 3x - 10$

