

Factoring with an “a” value

STEPS FOR FACTORING

$$ax^2 + bx + c$$

1. Always look for a GCF (Greatest Common Factor), if you find one, divide each term by the GCF and re-write using the distributive property.
2. Determine what two factors multiply to give you ac and add or subtract to give you b .

$$6x^2 + \underline{\underline{17x}} \oplus 5 \xrightarrow{6 \cdot 5 = 30}$$

3. If there is not an a value, write the factors in parenthesis with the correct signs. If there is an a value, rewrite the trinomial as with 4 terms that include the 2 factors that work.

$$6x^2 \qquad \qquad \qquad + 5$$

4. Separate a 4-term polynomial into equal groups and determine the GCF like step #1. Re-write the polynomial as the product of two binomials.