

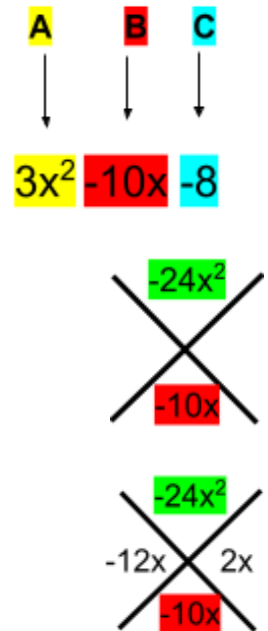
# Steps for Factoring a Trinomial

## Using the Box and Diamond Method

**Make a Box and Diamond as shown in class. Then:**

**First the Diamond Method:**  $(3x^2 - 10x - 8)$

1. Multiply the "a" term times the "c" term and put it on top of the diamond.
2. Put the "b" term at the bottom of the diamond.
3. Find and **list the factors of the value at the top** of the diamond
4. Choose the factors that (when combined by adding or subtracting) equal the "b" term of the trinomial.
5. Put those two terms on the side boxes of the diamond with the variable.



**Second the Box Method:**  $(3x^2 - 10x - 8)$

1. Put the "a" term of the trinomial in the top left box.
2. Put the "c" term in the bottom right box.
3. Put the two terms you found in the sides of the diamond in the two diagonal boxes with open spaces. (\*The order does not matter)
4. Find what you can factor out of the two left boxes and put that on top of the top left box.
5. Find what is needed to multiply what you just put on top to get what is in the top left box (the "a" term) then put that on the side of the top left box.
6. Find what is needed to multiply to find each box that is left blank.
7. The last two numbers should multiply to get what is in the last box on the bottom right (the "c" term)
8. Put both binomial factors in parentheses under your trinomial.  $(x - 4)(3x + 2)$

