Factoring Trinomials

Last Updated: 2/8/14

Example: $x^2 - 7x + 10$

To determine the signs of the two binomials in the answer, look at the sign of the last term in the trinomial, +10 here. Since '+' the signs of both binomials in the answer will be the same. To find out which sign, look at the sign of the middle term $-7x$. Since it is '–' the signs of the two binomials in the answer will be '–' like (–)(–).

- If the middle term would have been $+7x$, then the signs of the two binomials in the answer would have been '+' like (+)(+).
- If the sign of the last term is '–' the signs of the two binomials in the answer will be opposite like (–)(+) or (+)(–).

Create template for the two binomials in the answer. For this example, it will be $(x -)(x -)$.

Write out all factors of the last term +10 that add up to the coefficient of the middle term –7.

We know from above that the two factors will be negative and they are $-2 \cdot -5$.

So the answer is $(x - 2)(x - 5)$.