

Factoring by Trial and Error

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Think about what you would do when you start with the trinomial and want to factor it.

Starting with $6x^2 + 13x + 6$, we want to factor it into $(_ x + _) (_ x + _)$.

We know the sign should be + since the middle term and last term are positive. Think of the combinations that will make 6 6 & 1 3 & 2 What are the ways to mix and match a set from the factors of 6 so that when they are put together, we get 13, the middle term?

$(6x + 6) (x + 1) \dots$ gives 12 ... no – it is too small

$(6x + 1) (x + 6) \dots$ don't forget to try the reverse.... gives 37, way too big

$(3x + 3) (2x + 2) \dots$ gives 12

$(3x + 2) (2x + 3) \dots$ gives 13 ... that's it!

Note: I personally find the m & n method so easy, that if it takes me longer than 10 or 15 seconds using the Trial and Error method, I switch to the m & n method. I can't see spending time trying something if I know there is a method that will always work!