**4.6 More Trinomial Factoring**

Factor using **decomposition**. $2x^2 - x - 6$

**Decomposition Shortcut**

$2x^2 - x - 6$ $ax^2 + bx + c$

1. Find two numbers that _____ and _____.
2. Write two fractions with _____ and the _____.
3. _____, keeping the signs where they are, and write as the _____.

Ex. 1 Factor completely

a) $3x^2 - 10x + 8$

b) $6x^2 - 5x - 4$

Don't over-complicate... If you have to factor an expression like $3x^2 + 1x - 2$, there aren't many possibilities! Do you know why?

**Working Forwards - notice the patterns as we take it up a notch!**

Ex.2 Expand.

a) $(x + 3y)(x - 5y)$

b) $(x^2 - 3)(x^2 - 7)$

Ex.3 Factor

a) $21 - 10q + q^2$

b) $x^2 + 8xy + 7y^2$

c) $x^4 + 9x^2 + 20$

d) $12m^2 - 10mn - 12n^2$

*How can we check to see if our factoring is correct?*