

Factoring Notes 1

Factoring is a way of rewriting equations so they are easier to solve.

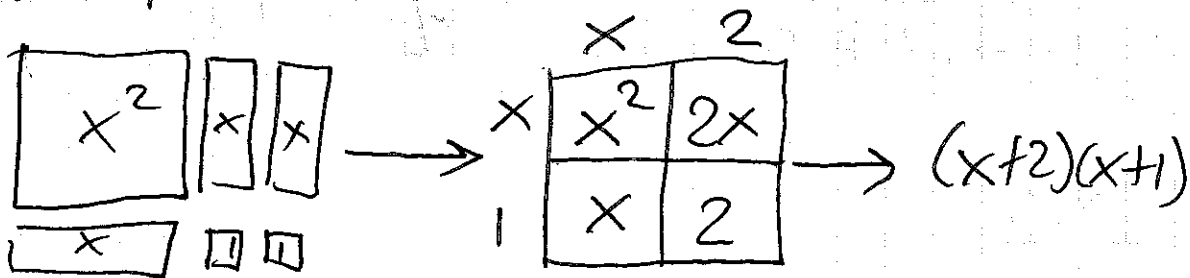
Factoring is also how we find the dimensions of a rectangle with a given area.

Like 24 factors to be $1 \cdot 24, 2 \cdot 12, 3 \cdot 8, 4 \cdot 6$ because those are all the rectangles with an area of 24.

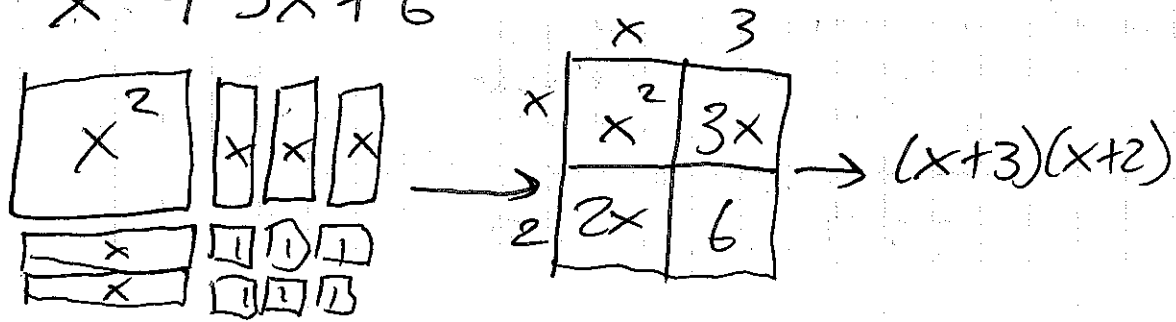
Remember $x^2 = x \times \square$, $x = x \times \square$, $1 = \square \times \square$

Think visually. Factoring is about rectangles.

Ex 1 $x^2 + 3x + 2$



Ex 2 $x^2 + 5x + 6$



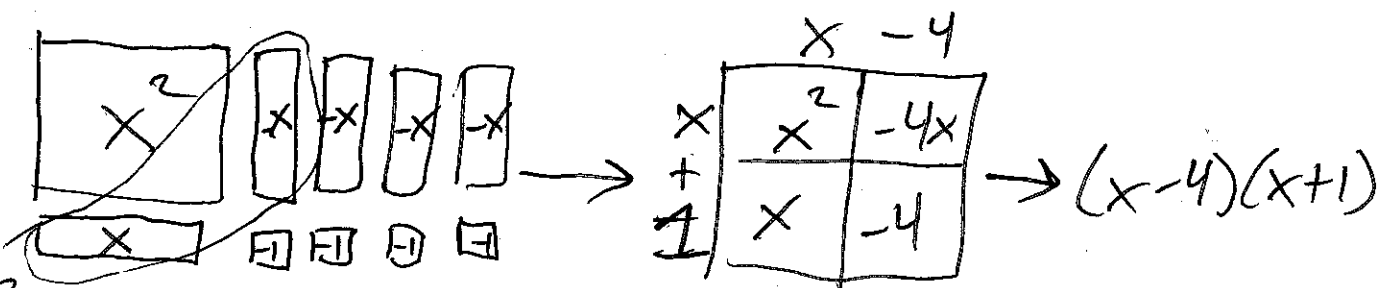
Notice how the insides of the area models add up to the original quadratic.

Notice how the outsides of the area models multiply to equal the insides.

Outsides Multiply, Insides Add

Remember that 2 negatives multiply to be a positive. A negative times a positive is negative.

Ex 3) $x^2 - 3x - 4$



These cancel. You still have $-3x$.

Ex 4) $x^2 - 4x - 12$

