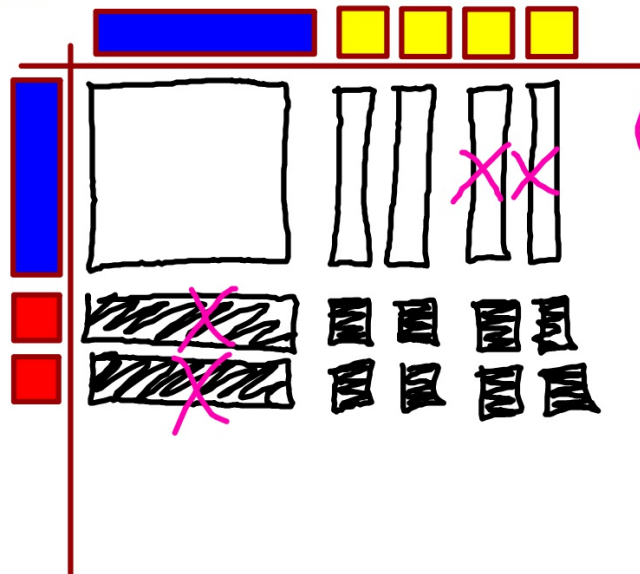


Factoring by Modeling



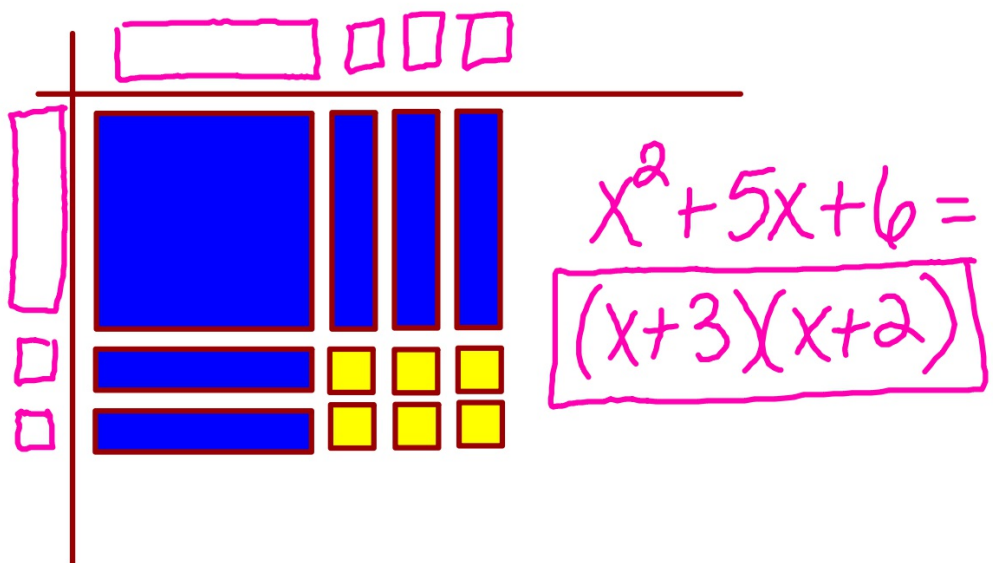
"I'll have the math homework."

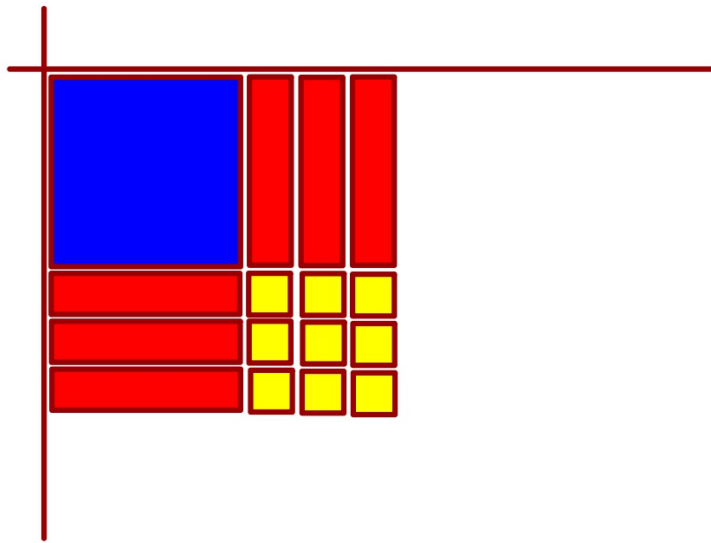
Let's Recall



$$(x+4)(x-2) = x^2 + 2x - 8$$

Awesome! Now let's work backwards.





Enough modeling. Let's factor!

$$Ax^2+Bx+C$$

$$A=1 \quad B=6 \quad C=8$$

$$x^2+6x+8$$

$$x \quad +4$$

x	x^2	$4x$
$+2$	$2x$	8

$$(x+4)(x+2)$$

Multiply Add

$$a \cdot c \quad +b$$

$$8 \quad | \quad 6$$

$$1 \cdot 8 \quad | \quad 9$$

$$2 \cdot 4 \quad | \quad 6$$

Factor $A=1$ $B=7$ $C=10$
 $x^2+7x+10$

a · c	+b
10	7
1 · 10	11
2 · 5	7

	x	+5
x	x^2	$5x$
+2	$2x$	10

$$(x+5)(x+2)$$

Factor $A=1$ $B=5$ $C=6$
 c^2+5c+6

$a \cdot c$	$+b$
6	5
1 · 6	7
2 · 3	5

	c	$+3$
c	c^2	$3c$
$+2$	$2c$	6

$$(c+3)(c+2)$$