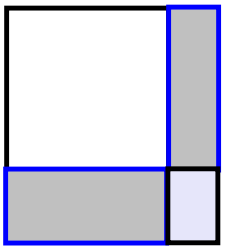
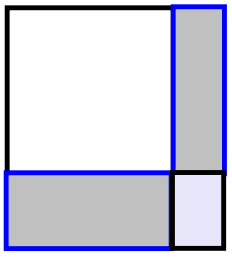
3.4a Trinomials as products of binomials

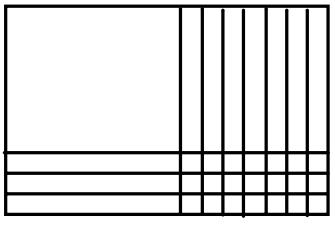
*If we want to multiply 13 x 17 we can use a grid or an area model to find the answer.



*And if we want to multiply two binomials?

ex. (x + 3)(x + 7) or (x + 3)(x + 7)





*Expand

a) (x + 2)(x + 6)

b) (x - 2)(x + 6)

c) (x + 2)(x - 6)

c) (x - 2)(x - 6)

What do we notice?

With this pattern, transform these trinomials into the product of 2 binomials.

ex. a) $x^2 + 7x + 12$ b) $x^2 + 7x + 13$

c) $x^2 + 5x + 6$ d) $x^2 + x - 12$

e) $x^2 - x - 12$ f) $x^2 - x + 12$

What could replace the ? so that the trinomial is factorable?

g) $x^2 + ?x + 15$ h) $x^2 + ?x + 12$

i) $x^2 + 5x + ?$ j) $x^2 - 3x + ?$

Algebra tiles can also be useful!! If we arrange the tiles of a trinomial into a perfect rectangle, the side lengths represent each factor.

$x^2 + 5x + 6$ $x^2 - 7x + 12$

Homefun: Pg. 158 #1-4