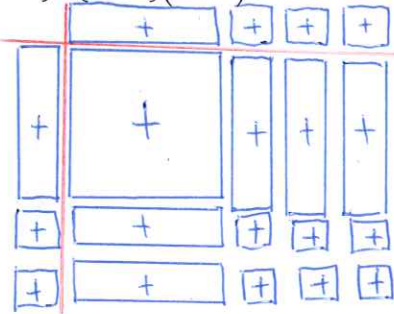## 3.5 Polynomials of the Form $x^2 + bx + c$
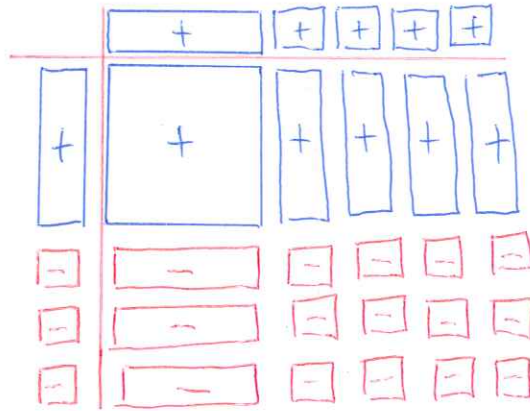
Example: Use algebra tiles to expand:

a) $(x+2)(x+3)$
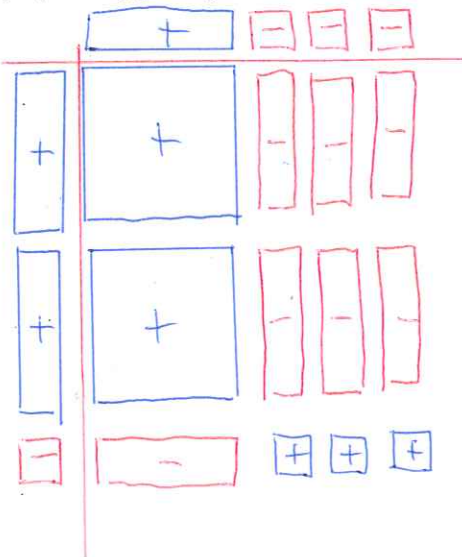

$$x^2 + 5x + 6$$
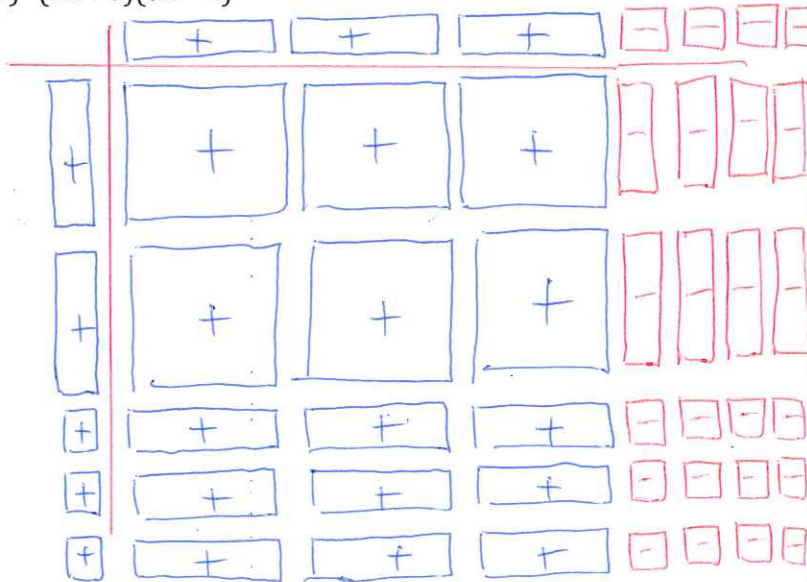
b) $(x-3)(x+4)$

$$x^2 + x - 12$$

c) $(2x-1)(x-3)$
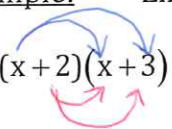

$$2x^2 - 7x + 3$$

d) $(2x+3)(3x-4)$

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

How can we multiply binomials without algebra tiles? Try the previous examples.
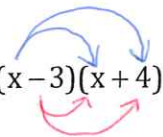
Example: Expand:
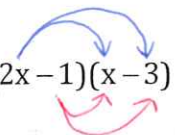
b) $(x+2)(x+3)$

$= x^2 + 3x + 2x + 6$

$= x^2 + 5x + 6$
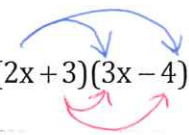
b) $(x-3)(x+4)$

$= x^2 + 4x - 3x - 12$

$= x^2 + x - 12$

c) $(2x-1)(x-3)$

$= 2x^2 - 6x - 1x + 3$

$= 2x^2 - 7x + 3$

d) $(2x+3)(3x-4)$

$= 6x^2 - 8x + 9x - 12$

$= 6x^2 + x - 12$