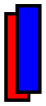
2.7A FACTORING x^2+bx+c WITH ALGEBRA TILES

USING RECTANGLES:

Rules of the game:

- The large squares (x^2) cannot touch the small squares (1)
- The tiles in each quadrant must be the same colour
- You may bring in zeros to help you create the rectangle

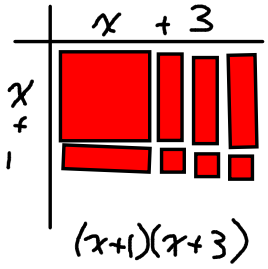
☆  Zero

☆ Area Model

	x	$+1$
x	x^2	x
$+1$	x	1

Create rectangles using the following tiles:

tiles



$(x+1)(x+3)$

diagram

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

algebra

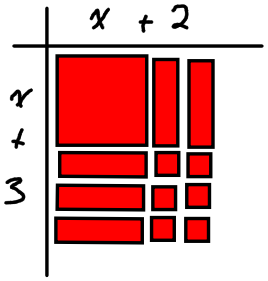
x^2+4x+3

$=(x+3)(x+1)$

M 3
A 4
N 3, 1

x^2+5x+6

tiles



diagram

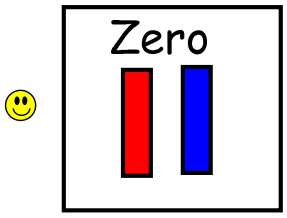
	x	$+2$
x	x^2	$2x$
$+3$	$3x$	6

algebra

$=(x+2)(x+3)$

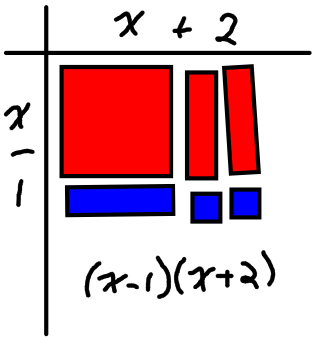
M 6
A 5
N 2, 3

Create rectangles using the following tiles:

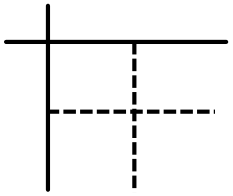


$x^2 + x - 2$

tiles



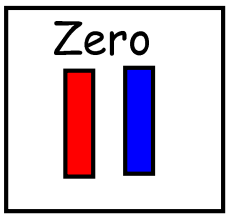
diagram



algebra

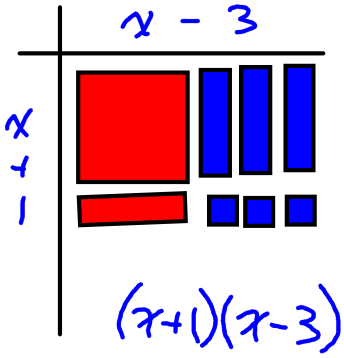
$(x+2)(x-1)$

M -2
A 1
N 2, -1

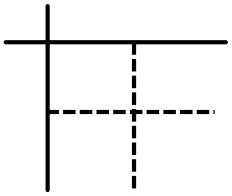


$x^2 - 2x - 3$

tiles



diagram

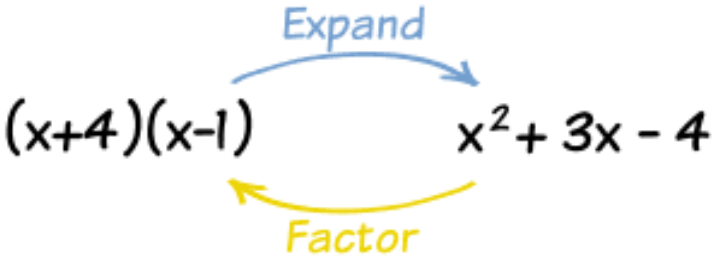


algebra

$(x-3)(x+1)$

M -3
A -2
N -3, 1

$\frac{-3}{1, -3}$


Expand
(x+4)(x-1)
x²+ 3x - 4
Factor

Practice
Complete the algebra tile puzzles