

FOIL

Multiplying binomials by the FOIL Method

In algebra, many of the polynomials to be multiplied are both binomials (with just two terms). For these products the FOIL Method reduces

the rectangle method to a systematic approach without the rectangles.

To develop the FOIL methods, we use the distributive property to find.

$$(x+3)(x+5)$$

$$(x+3)(x+5) = (x+3)x + (x+3)5$$

$$x(x) + 3(x) + x(5) + 3(5)$$

$$=x^2+3x+5x+15$$

$$=x^2+8x+15$$

$(x+3)(x+5)$	Multiply the F irst two terms: $x(x)$	F
$(x+3)(x+5)$	Multiply the O uter terms: $x(5)$	O
$(x+3)(x+5)$	Multiply the I nnner terms: $3(x)$	I
$(x+3)(x+5)$	Multiply the L ast terms: $3(5)$	L

The inner product and the outer product can be added mentally so that the three terms can be written without the extra