

Name: _____

8A; Algebra 1

Date: _____

Period _____

How Do We Multiply Two Binomials?



To multiply a binomial by a binomial we can use one of three methods:

1. Simple multiplication
2. The Table Method (Geometric Approach)
- **3. FOIL (Double Distributive) F = First O = Outer I = Inner L = Last

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

<u>Method 1</u> Simple Multiplication	<u>Method 2</u> The Table/Box Method	<u>**Method 3</u> Double Distributive

Practice:

1) $(d + 9)(d - 3) =$

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

3) $(5y - 2)(3y + 1) =$

4) $(8 - e)(5 - e) =$

5) Will a binomial times a binomial always yield a trinomial answer?

(a) $(x + 7)(x - 7) =$

(b) $(10 - p)(10 + p) =$

6) $(x + 4)^2 =$

7) $(3x - 7)^2 =$

8) Find the area of a square whose side measure $(y + 4)$.

9) A rectangle has a length of $(3x - 4)$ units and a width of $(4x + 5)$ units. Write a trinomial that represents the area of the rectangle.

10) Find the area of a rectangle whose base is $(c^2 - 2c + 4)$ and whose height is $(c + 2)$.
(Can FOIL be used in this example? _____ Explain.

11) $(x - 2)(x^2 - x + 4)$

Use the following table to help you evaluate the following products

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

13) $(x - 3)(x + 4)$

	X	5
X		
3		

	X	-3
X		
4		

Create a box diagram and then use it to find the following products

14) $(x - 2)(x - 2)$

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

16) Use the following table to help evaluate the following product

$(x - 2)(3x^2 - 4x + 7) =$

	$3x^2$	$-4x$	7
x			
-2			