

Before we begin, are there any questions from last day's work?

## Today's Learning Goal(s):

By the end of the class, I will be able to:

- a) multiply two binomials together, and simplify the result.

MPM 2DI

## 5.1 Multiply Polynomials

Date: Apr. 18/16

**Recall:** Here are some examples of algebra concepts.

Ex.1 Simplify.

(pay attention to the minor differences, i.e., addition vs. multiplication)

a)  $2a + 3a$   
 $= 5a$

b)  $(2a)(3a)$   
 $= (2 \times 3)a^{1+1}$   
 $= 6a^2$

c)  $2a + 3c$   
 $= \text{Does Not Simplify}$

d)  $(2a)(3c)$   
 $= 6ac$

e)  $2(x+3)$   
 $= 2x + 6$

f)  $2x(x+7)$   
 $= 2x^2 + 14x$

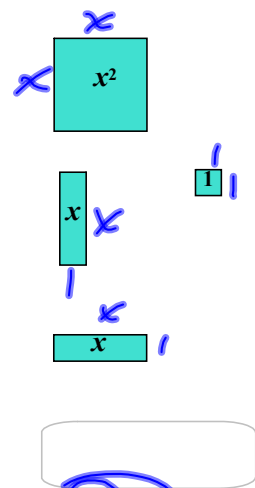
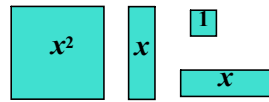
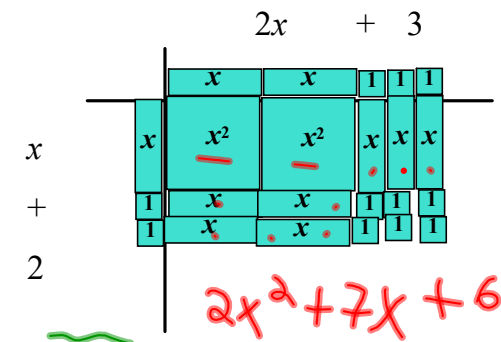
g)  $3x(2x+5y)$   
 $= 6x^2 + 15xy$

For extra practice, choose from  
 pp. 208-209 #1, 2, 3abc, 4abc, 6, 8, 9, 10

$3xy + 7yx$  vs.  $3x^2y + 7y^2x$   
 $= 10xy$  /  $3x^2y + 7xy^2$

Ex.2 Expand and Simplify. (see Algebra Tiles p.214...also "using smiles")

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



a)  $(2x+3)(x+2)$   
 $= 2x^2 + 4x + 3x + 6$   
 $= 2x^2 + 7x + 6$

b)  $(x+4)(x+7)$   
 $= x^2 + 7x + 4x + 28$   
 $= x^2 + 11x + 28$

c)  $(x+5)(x-3)$   
 $= x^2 - 3x + 5x - 15$   
 $= x^2 + 2x - 15$

Ex.3 Expand and Simplify.

a)  $(2x+5)(3x-4)$   
 $= 6x^2 - 8x + 15x - 20$   
 $= 6x^2 + 7x - 20$

b)  $(2x-3y)(4x-5y)$   
 $= 8x^2 - 10xy - 12xy + 15y^2$   
 $= 8x^2 - 22xy + 15y^2$

c)  $-5(x+1)(x-4)$   
 $= -5(x^2 - 4x + x - 4)$   
 $= -5(x^2 - 3x - 4)$   
 $= -5x^2 + 15x + 20$

d)  $(3x+4)^2$   
 $= (3x+4)(3x+4)$   
 $= 9x^2 + 12x + 12x + 16$   
 $= 9x^2 + 24x + 16$

e)  $(x+3)(x+4) - (2x-3)(x+6)$   
 $= x^2 + 4x + 3x + 12 - (2x^2 + 12x - 3x - 18)$   
 $= x^2 + 7x + 12 - (2x^2 + 9x - 18)$   
 $= x^2 + 7x + 12 - 2x^2 - 9x + 18$   
 $= -x^2 - 2x + 30$

## Be ready for the Unit 4 Summative tomorrow!

Today's entertainment: p. 218 # 6, 7, 8abce, 10

**Enrichment:** pp. 218-219 #11, 12abc

[in c), use a table of values], 14

For extra practice, choose from  
pp. 208-209 #1, 2, 3abc, 4abc, 6, 8, 9, 10