

Algebra I BE - WEDNESDAY 1-6-10

① $(-2x + 3y - 2) - (-4x + 6y + 1)$

② $3xy(4x + 2y - 3) + 8xy$

* From 2008/2009 ACT Practice Test

* ③ Simplify $(4x^2)^3$

* ④ Simplify $2(4x + 7) - 3(2x - 4)$

Homework: Pg 441 #12-22 evens
Review #30

Pg 446-448 #15, 22, 26,
34, 38, 62.

Ch. 8-7

Multiplying Polynomials

We are going to start by
multiplying two binomials

ⓔ (x+3)(x+2)

Before we do, let's try a
simpler example:

$$(1+2)(3+4) = (3)(7) = 21$$

Try $(1+2)(3+4)$

$$1 \cdot 3 + 1 \cdot 4 + 2 \cdot 3 + 2 \cdot 4 = 3 + 4 + 6 + 8 = 21 \checkmark$$

using your DP ARROWS works!

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

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

$$\boxed{x^2 + 5x + 6}$$

Ⓔ (EX) $(x-5)(x+7)$

$(x-5)(x+7)$

$$x^2 + 7x - 5x - 35 = \boxed{x^2 + 2x - 35}$$

Notice: When you multiplied a 1st degree binomial by a 1st degree binomial you raised the degree of the answer.

What happens to the degree of a polynomial when you add polynomials?
Why?

Ⓔ (EX) $(2y+3)(6y-7)$

$$12y^2 - 14y + 18y - 21$$

$$\boxed{12y^2 + 4y - 21}$$

How would you multiply a binomial times a trinomial?

Ex $(4x+9)(2x^2-5x+3)$

$$(4x+9)(2x^2-5x+3)$$

$$8x^3 - 20x^2 + 12x$$

$$+ 18x^2 - 45x + 27$$

TIP START NEW
line, line up
"like" terms

$$= \boxed{8x^3 - 2x^2 - 33x + 27}$$

Ex $(x+2)(x+5)$

$$x^2 + 5x + 2x + 10$$

$$\boxed{x^2 + 7x + 10}$$

$$(x+2)(x+5)$$

"FOIL"

FIRST, OUTER, INNER, LAST

JUST use ARROWS!

ⓔx $(y^2 - 2y + 5)(6y^2 - 3y + 1)$

$(y^2 - 2y + 5)(6y^2 - 3y + 1)$

9 multiplication for DP

$$6y^4 - 3y^3 + y^2$$

$$-12y^3 + 6y^2 - 2y$$

ADD $+30y^2 - 15y + 5$

$$6y^4 - 15y^3 + 37y^2 - 17y + 5$$

Homework: Pg 455 # 13-37 every 3rd

13, 16, 19, ...

(1st column)