

Warm-Up: until 10:45

1) $(x-2)(x+4)$

2) $(x-3)(x-6)$

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

4) $(x-3)^2$

5) $(x-10)^2$

6) $(x-7)^2$

7) What can you notice about multiplying these binomials as a whole? Patterns? Processes?

2) $(x-3)(x-6)$

	x	-3
x	x^2	$-3x$
-6	$-6x$	18

$$x^2 - 9x + 18$$

6) $(x-7)^2$
 $(x-7)(x-7)$

	x	-7
x	x^2	$-7x$
-7	$-7x$	$+49$

$$x^2 - 14x + 49$$

$$8) (x+4)(x-4)$$

	$x+4$	
x	x^2	$4x$
-4	$-4x$	-16

$$x^2 + 0x - 16$$

$$x^2 - 16$$

Ch. 6 factoring
 Part I: $x^2 + bx + c$

$$1) \quad x^2 + 6x - 7 \rightarrow (x+7)(x-1)$$

	x	$= 1$
x	x^2	$-1x$
7	$7x$	-7

$$\begin{aligned} -1, 7 &= 6 \\ 1, -7 &= -6 \end{aligned}$$

$$2) \quad x^2 - x - 12 \rightarrow (x-4)(x+3)$$

	x	-4
x	x^2	$-4x$
3	$3x$	-12

f. of -12

$$-3, 4 = 1$$

$$3, -4 = -1$$

~~$$1, 12$$~~

~~$$1, -12$$~~

~~$$2, 6$$~~

~~$$2, -6$$~~

$$3) \quad a^2 + 11a + 18 \rightarrow (a+9)(a+2)$$

	a	2
a	a^2	$2a$
9	$9a$	18

F of 18.

$$\begin{array}{r} 3 \mid 6 \\ -3 \mid 6 \\ \hline 11 = 9, 2 \\ \hline \cancel{11 = 9, 2} \end{array}$$

Part 2: Perfect Squares

1) $x^2 - 25$

$$\underbrace{x^2}_{x} + 0x - \underbrace{25}_{=5}$$

x^2	$-5x$
$5x$	-25

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

2) $x^2 - 64$

$$(x+8)(x-8)$$

3) $x^2 - 121$

$$(x+11)(x-11)$$