pp. 42-43 Multiplying Polynomials-Special Products

Warm Up:

p. 42

1) Find the following products:

a.) $(x + 3)(x - 3)$

$x^2 - 3x + 3x - 9$

$x^2 - 9$

b.) $(2x - 1)(2x + 1)$

$4x^2 + 2x - 2x - 1$

$4x^2 - 1$

What do you notice about the middle term?

Kuta Software - Infinite Algebra 1

Name_____

Multiplying Polynomials

Date_____ Period____

Find each product.

1) $6v(2v + 3)$
$12v^2 + 18v$

2) $7(-5v - 8)$
$-35v - 56$

3) $2x(-2x - 3)$
$-4x^2 - 6x$

4) $-4(v + 1)$
$-4v - 4$

5) $(2n + 2)(6n + 1)$
$12n^2 + 14n + 2$

6) $(4n + 1)(2n + 6)$
$8n^2 + 26n + 6$

7) $(x - 3)(6x - 2)$
$6x^2 - 20x + 6$

8) $(8p - 2)(6p + 2)$
$48p^2 + 4p - 4$

9) $(6p + 8)(5p - 8)$
$30p^2 - 8p - 64$

10) $(3m - 1)(8m + 7)$
$24m^2 + 13m - 7$

11) $(7a - 1)(8a - 5)$
$16a^2 - 18a + 5$

12) $(5n + 6)(5n - 5)$
$25n^2 + 5n - 30$

13) $(4p-1)^2$
$16p^2-8p+1$

14) $(7x-6)(5x+6)$
$35x^2+12x-36$

15) $(6n+3)(6n-4)$
$36n^2-6n-12$

16) $(8n+1)(6n-3)$
$48n^2-18n-3$

17) $(6k+5)(5k+5)$
$30k^2+55k+25$

18) $(3x-4)(4x+3)$
$12x^2-7x-12$

19) $(4a+2)(6a^2-a+2)$
$24a^3+8a^2+6a+4$

20) $(7k-3)(k^2-2k+7)$
$7k^3-17k^2+55k-21$

21) $(7r^2-6r-6)(2r-4)$
$14r^3-40r^2+12r+24$

22) $(n^2+6n-4)(2n-4)$
$2n^3+8n^2-32n+16$

23) $(6n^2-6n-5)(7n^2+6n-5)$
$42n^4-6n^3-101n^2+25$

24) $(m^2-7m-6)(7m^2-3m-7)$
$7m^4-52m^3-28m^2+67m+42$

Special Products- Difference of Squares

Use the box method or distributive property to multiply the following difference of squares.

1.) $(x - 7)(x + 7)$

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

$x^2 - 49$

2.) $(3x - 2)(3x + 2)$

	$3x$	$+2$
$3x$	$9x^2$	$+6x$
-2	$-6x$	-4

$9x^2 - 4$

Formula: $(a + b)(a - b) = a^2 - b^2$

Special Products- Perfect Squares

Use the box method or distributive property to multiply the following difference of squares.

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

$(x-7)(x-7)$

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

$x^2-14x+49$

4.) $(3x - 2)^2$

	$3x$	-2
$3x$	$9x^2$	$-6x$
-2	$-6x$	$+4$

$9x^2-12x+4$

Puzzle Activity.

Homework:

Finish Multiplying Polynomials Worksheet