Algebra 1 Unit 4: Radicals and Polynomials Notes

Day 6 – Multiplying Polynomials

There are several different ways to multiply polynomials. You will learn the distributive method and box method. Once you have practiced both methods, you can determine which one you like best and works for you.

EXAMPLE 1:

Distributive Method: $2x(x-4)$

$2x^2 - 8x$

Box Method: $2x(x-4)$

	x	-4
$2x$	$2x^2$	$-8x$

EXAMPLE 2:

Distributive Method: $(x+2)(x-9)$

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

$x^2 - 7x - 18$

Box Method: $(x+2)(x-9)$

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

$x^2 - 7x - 18$

$x^2 = x \cdot x$

EXAMPLE 3:

Distributive Method: $(2x-4)^2$

$(2x-4)(2x-4)$

Box Method: $(2x-4)^2$

	$2x$	-4
$2x$	$4x^2$	$-8x$
-4	$-8x$	$+16$

$4x^2 - 16x + 16$

EXAMPLE 4:

Distributive Method: $(x+6)(x-6)$

$x^2 - 6x + 6x - 36$

$x^2 - 36$

Box Method: $(x+6)(x-6)$

Algebra 1 Unit 4: Radicals and Polynomials Notes

Practice Problems

Solve these problems with a method of your choosing.

1) $(x-7)(x+4)$

2) $(x-9)^2$

$(x-9)(x-9)$

$x^2-9x-9x+81$

$x^2-18x+81$

	x	-9
x	x^2	$-9x$
-9	$-9x$	81

$x^2-18x+81$

3) $(x+10)(x-10)$

4) $x(x-12)$

5) $(3x+7)(2x+1)$

$6x^2+17x+7$

	$3x$	7
$2x$	$6x^2$	$14x$
$+1$	$3x$	7