

# Notes #2

## Lesson 9-2 Multiplying Binomials

Teenager Post # 5748

**Math: The only place  
where people buy 60  
watermelons and no  
one wonders why.**

//teenagerposts.tumblr.com

## Review:

Simplify each product.

$$2x^2(x+9)$$

$$2x^3 + 18x^2$$

binomial  
degree 3  
cubic

Simplify each product.

$$2x(6x^3 - x^2 + 5x)$$

$$12x^4 - 2x^3 + 10x^2$$

Trinomial degree 4  
quartic

### Multiplying Two Binomials Using the Distributive Property

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

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

$$12x^2 + 4x - 21$$

Trinomial degree 2  
quadratic

$$(9a-8)(7a+4)$$

$$63a^2 + 36a - 56a - 32$$

$$63a^2 - 20a - 32$$

Trinomial  
quadratic

### Multiplying Two Binomials Using the Box Method

$$(y+4)(5y-8)$$

	$5y$	$-8$
$y$	$5y^2$	$-8y$
$4$	$20y$	$-32$

Combine  
like  
terms  
(CLT)

$$5y^2 + 12y - 32$$

$$(8w+2)(w+5)$$

	$w$	$5$
$8w$	$8w^2$	$40w$
$2$	$2w$	$10$

$$8w^2 + 42w + 10$$

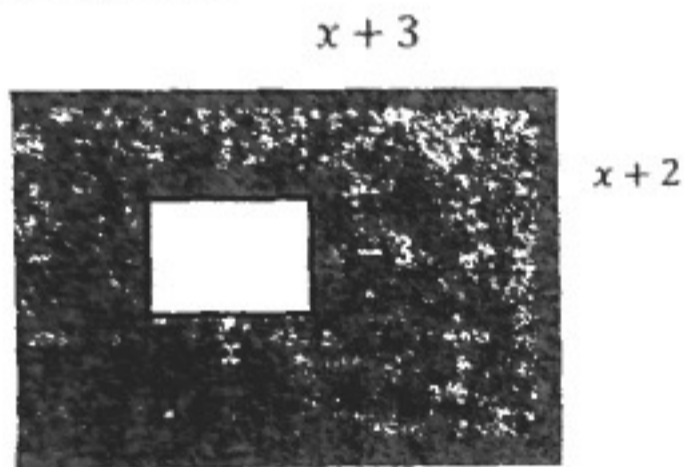
Multiply the Binomial and Trinomial Using the Box Method

$$(x+6)(x^2+2x-5)$$

	$x^2$	$2x$	$-5$
$x$	$x^3$	$2x^2$	$-5x$
$6$	$6x^2$	$12x$	$-30$

$$x^3 + 8x^2 + 7x - 30$$

Finding Area



Find the area of the shaded region.

$$\text{Area } \square = l \cdot w$$

Area of Large  $\square = x^2 + 5x + 6$

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

Area of small  $\square = x^2 - 3x$

	$x$	$-3$
$x$	$x^2$	$-3x$

Area Shaded Region = Area Lg  $\square$  - Area Sm  $\square$

$$= (x^2 + 5x + 6) - (x^2 - 3x)$$

$$x^2 + 5x + 6 - x^2 + 3x = 8x + 6$$