

Warm-Up:

Multiply.

1)  $5a^2(4a^2 - 3a + 7)$

$$20a^4 - 15a^3 + 35a^2$$

2)  $(y^5 - 3y^2 + 12)8y$

$$8y^6 - 24y^3 + 96y$$

34, 32, 36

32)  $T = 6000 + 0.02x + 0.01(6000 - x)$

$$T = 6000 + 0.02x + 240 - 0.04x$$

$$T = 6240 - 0.02x$$

34)



$$(5x+12)4x$$

$$20x^2 + 48x \text{ ft}^2$$

36)  $2(4x-7) = 5(-2x-9) - 5$

$$8x - 14 = -10x - 45 - 5$$

$$8x - 14 = -10x - 50$$

$$+10x \quad +10x$$

$$18x - 14 = -50$$

$$+14 \quad +14$$

$$18x = -36$$

$$\frac{18x}{18} = \frac{-36}{18}$$

$$x = -2$$

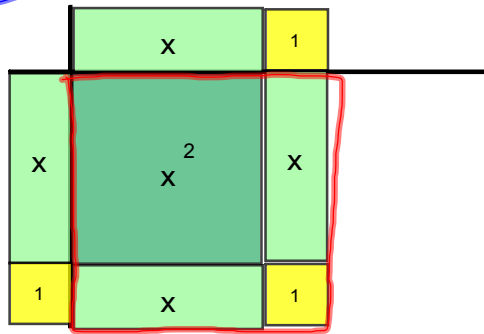
$$x(x+1) = x^2 + x$$



Section 7-6: Multiplying Polynomials

Multiply.

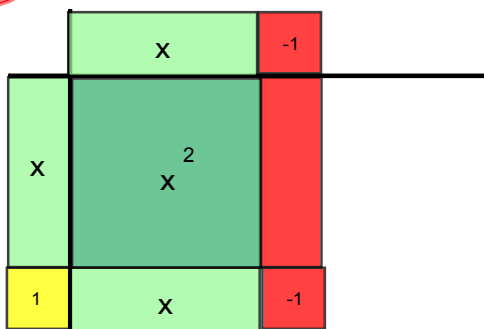
$$(x + 1)(x + 1) = x^2 + 2x + 1$$



Section 7-6: Multiplying Polynomials

Multiply.

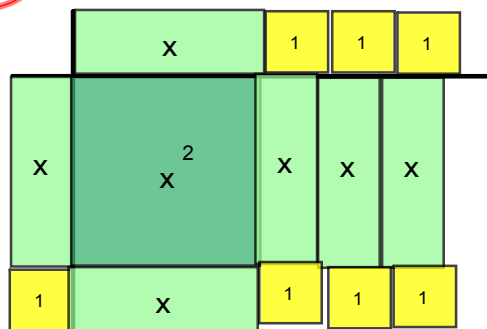
$$(x - 1)(x + 1) = x^2 + x - x - 1 = x^2 - 1$$



Section 7-6: Multiplying Polynomials

Multiply.

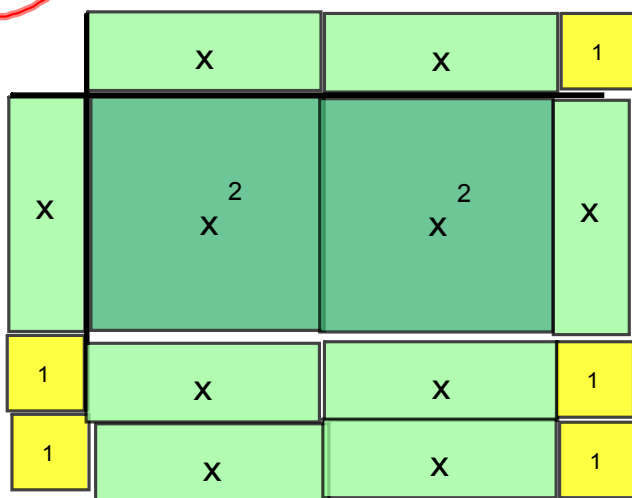
$(x + 3)(x + 1) = x^2 + 4x + 3$



Section 7-6: Multiplying Polynomials

Multiply.

$(2x + 1)(x + 2) = 2x^2 + 5x + 2$



## Section 7-6: Multiplying Polynomials

The FOIL Method refers to a version of the distributive property.

F      First Terms  
O      Outer Terms  
I      Inner Terms  
L      Last Terms

$$(x + 1)(x + 1) = \overset{\text{F}}{x^2} + \overset{\text{O}}{1x} + \overset{\text{I}}{1x} + \overset{\text{L}}{1}$$

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

Examples:

Find each product.

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

$$y^2 - 4y + 8y - 32$$

$$y^2 + 4y - 32$$

2)  $(z - 6)(2z + 8)$

$$2xz + 8z - 12x - 48$$

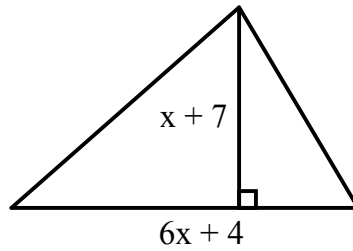
3)  $(5x - 4)(2x + 8)$

$$10x^2 + 40x - 8x - 32$$

$$10x^2 + 32x - 32$$

Examples:

4) The area  $A$  of a triangle is one-half the height  $h$  times the base  $b$ . Write an expression for the area of the triangle.



$$A = \frac{1}{2}bh$$

$$A = \frac{1}{2}(6x+4)(x+7)$$

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

$$3x^2 + 21x + 2x + 14$$

$$3x^2 + 23x + 14$$

Homework: pg. 401-403 #12-32 even, 44, 48, 54

Section 7-6 Vocab

Quiz over 7-5, 7-6 Next Class