

Math 9 Section 5.3 – Multiplying Polynomials

Homework: Section 5.3 on Pg. 181; #1-3half, 4-5all, 6a, 7-10half

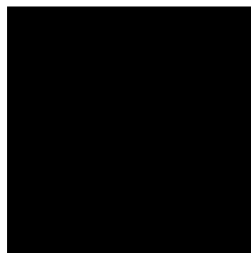
Recall our algebra tiles and how we figured out the value of each tile:



Positive 1
+1



Positive x
+ x

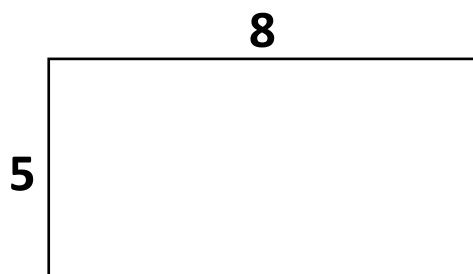


Positive x^2
+ x^2

When we calculate the area of a rectangle, we multiply the sides together.

If we want to find the answer for two numbers multiplied together, that's the same as finding the area of a rectangle with the length equal to the first number and width equal to the second number.

Area =

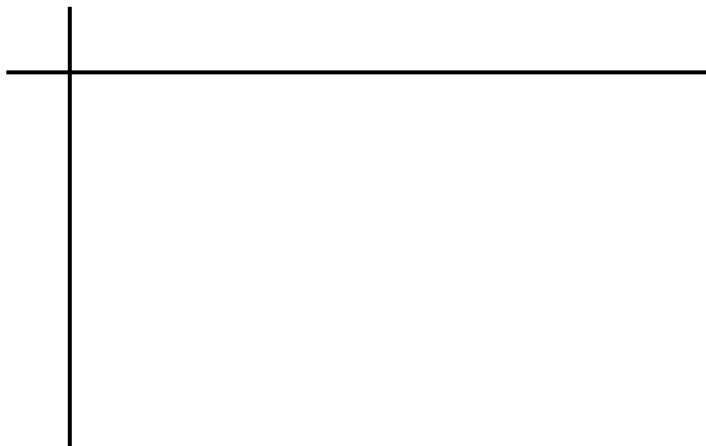


This idea also works for polynomials, and we can use the algebra tiles to “measure out” the sides of the rectangle.

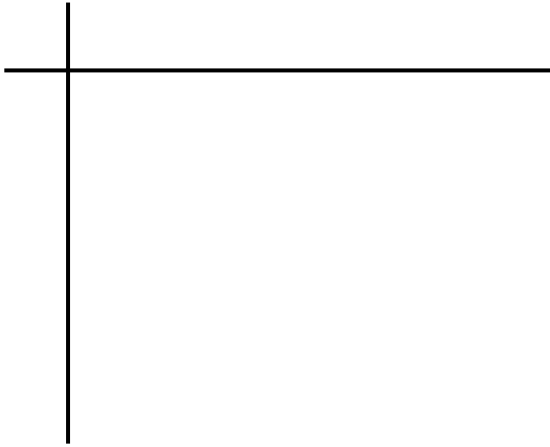
$2x$ multiplied by $3x$

Side #1

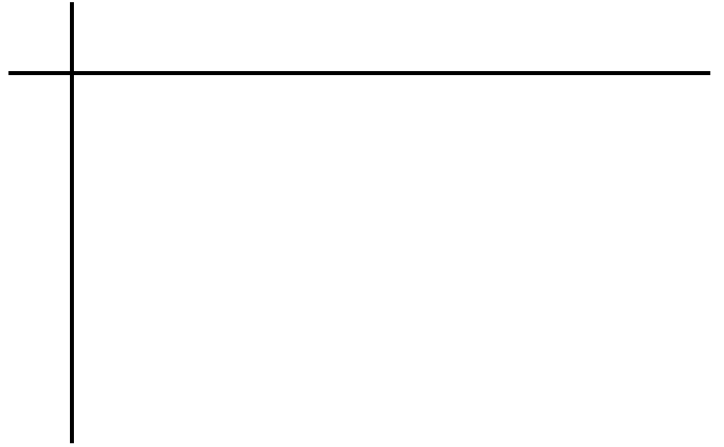
Side #2



-2 multiplied by 3x



-2x multiplied by 2x - 1



From our algebra tile pictures, we can see the pattern for multiplying polynomials:

1. _____

2. _____

3. _____

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

$$(-4x^2y)(x^4y^7) =$$

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

$$(3x + 2y)(xy) =$$

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