MBF 3C: UNIT 5 – Factoring and Expanding with Quadratics
Lesson 1: Expanding Binomials

Expressions like _____, _____ and _____ are called _____.

Just like numbers you can add, subtract, multiply and divide _____.

In _____ you are multiplying polynomials together.

Examples:

1) $2(3x)$ 2) $4x(5x)$ 3) $-2x^2(3x)$

- When multiplying binomials, _____ term in the first binomial must _____ every _____ in the second binomial.

Examples:

4) $2(3x-1)$ 5) $x(x-5)$ 6) $-3x(2x+1)$

- When multiplying two _____ together, every term in the first binomial must _____ every term in the second _____.

Examples:

7) $(x+3)(x+2)$ 8) $(x-5)(x+3)$ 9) $(2x+1)(3x+1)$

10) $(x+4)^2$ 11) $(\frac{1}{2}x+3)(x-4)$ 12) $(x-3)^2$

- Multiplying 3 polynomials together

13) $2(x+3)(x+4)$ 14) $-(x+2)(x-1)$

Complete the following examples and check your solutions with the person beside you.

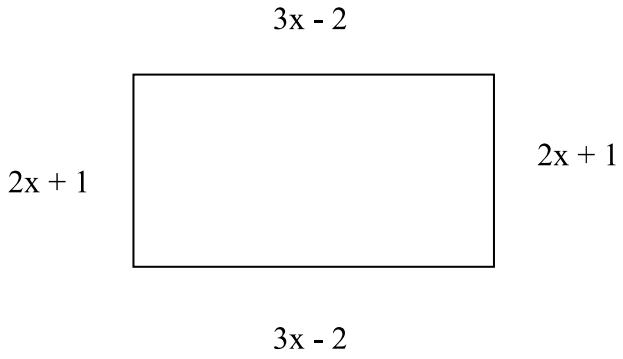
Textbook practice questions: Page 129 #1,2

Binomial Multiplication

A. Expand the following.

1. $(x + 3)(x + 4)$	2. $(x - 3)(x + 4)$	3. $(x - 2)(x - 3)$
4. $(x+4)\left(x+\frac{1}{4}\right)$	5. $(x - 3)^2$	6. $(2x + 3)(3x - 1)$
7. $4(x - 2)^2$	8. $5(3x - 1)^2$	9. $\left(\frac{1}{2}x+1\right)(3x - 2)$

B. Using the formulas for area and perimeter of a rectangle, find the area and perimeter of the rectangle shown.



C. Using your skills of binomial multiplication expand the following.

1. $y = (x - 3)(x + 5)$

2. $y = 2(x - 3)^2 + 5$

3. $y = -3(x + 1)^2 + \frac{1}{2}$