Algebra II Notes/Classwork Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Introduction to Long Division of Polynomials Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Warm-up:** Solve$ 209÷7$ using long division. (Hint: look at your homework!) **Label** the remainder. How could you write the quotient in fraction form?

**Long Division of Polynomials: Examples**



Example 1: $(x^{2}-3x+2)÷(x-2)$

 Take notes on the video to solve this problem. Label the remainder.

Example 2: $(5x^{2}+3x-14)÷(x-1)$

 We will do this as a class. You may be called to do a step on the board! Write down what your classmates do.

**Classwork/Homework:** Complete the following problems before our next class.



Check your work: your remainders should be 1, -6, -4, 8, 1 -9.

<https://www.khanacademy.org/math/algebra2/arithmetic-with-polynomials/long-division-of-polynomials/v/dividing-polynomials-1>

<https://academics.utep.edu/Portals/1788/CALCULUS%20MATERIAL/2_3%20POLYNOMIAL%20AND%20SYNTHETIC%20DIVISION.pdf>