Unit 1 : Algebra Skills
Topic: Partial Fraction Decomposition with Long Division
Objective: SWBAT rewrite a fraction as the sum/difference of two smaller fractions by first using long division

Warm Up #7:

Divide the following polynomials using long division: $\dfrac{2x^3-4x^2-5x+3}{x^2-2x-3}$

What happens if the degree of the numerator is greater than the degree of the denominator??

If the _____ has a higher order/degree than the

_____, we need to begin with _____ _____
Then examine the remainder for decomposition.

Example: Find the partial fraction decomposition for the following.

$$\frac{2x^3-4x^2-5x+3}{x^2-2x-3}$$

Let's see if we can do it again:

Find the partial fraction decomposition for each of the following.

1) $\frac{3x^3-2x^2-19x-7}{x^2-x-6}$

2) $\frac{x^3+1}{x^2+2x}$

3) $\frac{x^3+6x^2+17x+16}{x^2+4x+3}$

4) $\frac{x^3+2x+1}{x^2+x-2}$

Assignment(s): pg. 520 #69, 70, 77 and 78
Weekly Review #1