

Unit 1 : Algebra Skills

Topic: Partial Fraction Decomposition

Objective: *SWBAT* rewrite a fraction as the sum/difference of two smaller fractions.

Warm Up #6:

Add: $\frac{1}{x+5} + \frac{2}{x-3}$



A rational expression can often be written as the sum/difference of two or more simpler rational expressions. This is called the *partial fraction decomposition*.

Examples: Write the partial fraction decomposition for each of the following

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

b) $\frac{x + 7}{x^2 - x - 6}$

Problem Set #6: Rewrite each of the following fractions as the sum/difference of two smaller fractions.

1) $\frac{2}{x^2 - 2x}$

2) $\frac{5}{9x^2 - 25}$

3) $\frac{x - 9}{x^2 + 3x - 10}$

4) $\frac{6x - 25}{x^2 + x - 12}$

5) $\frac{3x - 28}{x^2 - 16}$

6) $\frac{4x - 7}{3x^2 - 17x + 10}$



