Honors Algebra 2 Name_____

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Unit 4 - Complex Fractions

Date_____ Period____

Complex Fractions

1) We can put multiple rational expressions together into an expression called a _____

_____. A complex fraction is a fraction that contains a _____

in both the numerator and the denominator. We can simplify a complex fraction by first

simplifying the _____ completely, then we simplify the

_____ completely. Next, we _____

like when we divide rational expressions. Lastly, we simplify the final expression.

Examples: Simplify each expression

1) $\dfrac{\frac{x-3}{9}}{\frac{3}{x+3}}$

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

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Simplify each expression.

2) $\dfrac{\dfrac{x-1}{x+4}}{\dfrac{x-1}{2}}$

3) $\dfrac{\dfrac{2}{3}}{\dfrac{4}{3x+12}}$

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4) $\dfrac{\dfrac{5}{4} + \dfrac{25}{a-1}}{a-1}$

5) $\dfrac{\dfrac{x+5}{4}}{\dfrac{4}{3x+2} - \dfrac{4}{x+5}}$

6) $\dfrac{\dfrac{u-2}{u-3} + \dfrac{u+5}{u-1}}{\dfrac{u-1}{u-3} + \dfrac{u+5}{u-3}}$

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7) $\dfrac{\dfrac{u-1}{3u+4}+\dfrac{1}{2}}{\dfrac{u-1}{4}+\dfrac{u-1}{3u+4}}$

8) $\dfrac{\dfrac{3}{x-2}-\dfrac{3x-3}{4}}{\dfrac{x-1}{4}+\dfrac{x-1}{x-2}}$

9) $\dfrac{\dfrac{5}{2}-\dfrac{4}{2u-3}}{\dfrac{u-2}{2}-\dfrac{u-2}{4}}$

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