

Secondary Math III
Subtract & Simplifying Complex Fractions
Assignment 5.4

Name _____
Period _____

Indicate the LCD and then find the difference. Factor and simplify answers if possible. List any restrictions for x.

1. $\frac{x}{3} - \frac{x+1}{5}$ LCD: _____

2. $\frac{x^2-1}{4} - \frac{x+1}{2}$ LCD: _____

3. $\frac{2}{x+1} - \frac{3}{x}$ LCD: _____

4. $\frac{x}{x-3} - \frac{x}{x+4}$ LCD: _____

5. $\frac{x+1}{x^2+3x} - \frac{x-1}{x+3}$ LCD: _____

6. $\frac{5}{x^2-4} - \frac{3}{x+2}$ LCD: _____

7. Given $f(x) = \frac{5}{x^2-9}$ and $g(x) = \frac{1}{x+3}$
find and simplify
 $f(x) + g(x)$

8. Given $f(x) = \frac{2}{x+2}$ and $g(x) = \frac{5}{x-3}$
find and simplify
 $f(x) + g(x)$

$g(x) - f(x)$

$g(x) - f(x)$

$\frac{f(x)}{g(x)}$

$\frac{f(x)}{g(x)}$

Simplify the complex fraction. List any restrictions for the variables.

$$9. \frac{1 - \frac{1}{x}}{x - \frac{1}{x}}$$

$$10. \frac{\frac{1}{y} + \frac{1}{x}}{\frac{1}{y} - \frac{1}{x}}$$

$$11. \frac{x - \frac{9}{x}}{1 + \frac{3}{x}}$$

$$12. \frac{x + \frac{4}{x}}{1 + \frac{3}{x^2}}$$