**PreCalculus Name**

**Add and Subtract Rational Expressions Notes Date**

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| **If** $\frac{a}{b} $**and** $\frac{c}{b}$ **are two rational expressions, then**$$\frac{a}{b}+\frac{c}{b}=\frac{a+c}{b} \frac{a}{b}-\frac{c}{b}=\frac{a-c}{b} if b\ne 0$$ |
| **Perform the indicated operation and simplify the result. Leave your answer in factored form.** |
| **Example 1:**$$\frac{2x^{2}-4}{2x+5}+\frac{x+3}{2x+5} x\ne -\frac{5}{2}$$ | **You Try 1:**$$\frac{x^{2}}{2x-3}-\frac{4}{2x-3} x\ne \frac{3}{2}$$ |
| **Example2:**$$\frac{x-3}{x+4}-\frac{x}{x-2}$$ | **You Try 2:**$$\frac{4}{x-1}+\frac{2}{x+2}$$ |

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| **Example 3:**$$\frac{x}{x+1}+\frac{2x-3}{x-1}$$ | **You Try 3:**$$\frac{3x}{x-4}-\frac{2x}{x+3}$$ |
| **Example 4:**$$\frac{x^{2}}{x^{2}-4}-\frac{1}{x}$$ | **You Try 4:**$$\frac{x}{x^{2}-4}+\frac{1}{x}$$ |

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| **Warm-Up** |
| **Perform the indicated operation and simplify the result. Leave your answer in factored form.**1. $\frac{\frac{8x}{x^{2}-1}}{\frac{10x}{x+1}}$
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| **Wrap-Up** |
| **Perform the indicated operation and simplify the result. Leave your answer in factored form.** 1. $\frac{x-3}{x+2}-\frac{x+4}{x-2}$
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| **Name Date** |