Math III Honors – Add and Subtract Rational Expressions WS

Name: _____   Date: _____

Find each sum. Simplify where possible. State any restrictions on the variable.

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

2) $\dfrac{5x}{x^2 - 9} + \dfrac{2}{x + 4}$

3) $\dfrac{5x}{x^2 - x - 6} + \dfrac{4}{x^2 + 4x + 4}$

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

5) $\dfrac{4}{x^2 - 9} + \dfrac{7}{x + 3}$

6) $\dfrac{x}{2x^2 - x} + \dfrac{1}{2x}$

Find each difference. Simplify where possible. State any restrictions on the variable.

7) $\dfrac{-5y}{2y-1} - \dfrac{y+3}{2y-1}$

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

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

10) $\dfrac{3}{4x} - \dfrac{2}{x^2}$

11) $\dfrac{5x}{x^2-x-6} - \dfrac{4}{x^2+4x+4}$

12) $4y - \dfrac{y+2}{y^2+3y}$