

Name: \_\_\_\_\_

**WS - Rational Functions – Order of Operations**

Mar 25, 2019

Simplify and state and restrictions:

1.  $\frac{3x+1}{2x-3} + \frac{x}{x^2-9}$

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

3.  $\frac{3x}{6x^2-x-2} + \frac{2x}{10x^2-x-3}$

4.  $\frac{x+1}{2x^2-7x+6} - \frac{x-3}{2x^2-x-3}$

5.  $\frac{3x}{6x^2+13x-5} + \frac{2x+1}{6x^2+7x-3}$

6.  $\frac{x-2}{6x^2-7x-5} \div \frac{2x}{3x^2-5x} - \frac{3x+2}{2x^2+11x+5}$

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Answers:

1.  $\frac{3x^3+3x^2-30x-9}{(2x-3)(x-3)(x+3)}$
2.  $\frac{x(4x+15)}{(x+1)(x+2)(x+3)}$
3.  $\frac{x(21x-13)}{(2x+1)(3x-2)(5x-3)}$
4.  $\frac{7x-5}{(x-2)(x+1)(2x-3)}$
5.  $\frac{10x^2+21x+5}{(2x+3)(2x+5)(3x-1)}$
6.  $\frac{x^2-3x-14}{2(x+5)(2x+1)}$

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