

6.3 Adding and Subtracting Rational Expressions

* As with adding fractions, we need a

ex. $\frac{3}{x+1} + \frac{5x}{2x+3}$

* restrictions

* domain

ex. $\frac{x^2 - 20}{y^2 - 4} + \frac{y - 2}{y + 2}$

* restrictions

* domain

Note: we must be careful when subtracting negative rational expressions

ex. $\frac{3}{x+5} - \frac{x-4}{x+5}$

* restrictions

* domain

ex. $\frac{5x}{x+1} - \frac{7x+1}{x-1}$

* restrictions

* domain

ex. $\frac{1 + \frac{1}{x}}{x - \frac{1}{x}}$

* restrictions

* domain

Note: $(3 - x) =$