MATH 123 **Simplifying Rational Expressions II**

Perform the indicated operations and simplify completely.

$\dfrac{4x-24}{x^2-6x}$

$\dfrac{x^2-4}{x^2-2x-8}$

$\dfrac{10+3x-x^2}{x^2-4x-5}$

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

$\dfrac{5}{9x^2}+\dfrac{1}{6x}$

$\dfrac{2x}{2x-3}-\dfrac{1}{x+1}$

$\dfrac{2x-3}{3x^2-x-2}+\dfrac{5}{3x+2}-\dfrac{1}{x-1}$

$\dfrac{3p^2+11p-4}{24p^3-8p^2}\div\dfrac{9p+36}{24-36p^3}$

$\dfrac{y+2}{y^2-y}-\dfrac{3y}{2y^24y+2}$

$\dfrac{6-\dfrac{5}{k}}{1+\dfrac{5}{k}}$

$\dfrac{1}{m^2-m-2}-\dfrac{1}{m^2+3m+2}$

$\dfrac{m-\dfrac{1}{m^2-4}}{\dfrac{1}{m+2}}$

$\dfrac{3x^2+x-2}{3x^2-8x+4}$

$\dfrac{x^2-4x-32}{x^2-8x-48}\cdot\dfrac{3x^2+17x+10}{3x^2-22x-16}$

$\dfrac{y^2-y-56}{y^2+8y+7}\div\dfrac{y^2-13y+40}{y^2-4y-5}$

$\dfrac{6n^2+13n+6}{4n^2-9}\div\dfrac{6n^2+n-2}{4n^2-1}$

$\dfrac{1-\dfrac{2}{x}-\dfrac{15}{x^2}}{1-\dfrac{11}{x}+\dfrac{30}{x^2}}$

$\dfrac{x^2-3x}{5x^2}\cdot\dfrac{10x}{x^2-4x+3}$

$\dfrac{\dfrac{1}{3}-\dfrac{1}{x}}{\dfrac{1}{9}-\dfrac{1}{x^2}}$

$\dfrac{3x-9}{x^2-2x}\div\dfrac{x^2-x-6}{x^2-4}$

$\dfrac{5}{x-2}-\dfrac{1}{x+3}$

$\dfrac{2x}{x+3}+\dfrac{6}{x+3}$

$\dfrac{3}{x}-\dfrac{2}{x^2}$

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

$\dfrac{4x^2-25}{2x^2-5x}\div(6x+15)$

$\dfrac{4}{x-2}-\dfrac{7}{x+5}=0$

$\dfrac{5}{3x}+\dfrac{1}{x^2}=\dfrac{5}{2x}$

$\dfrac{10}{x-3}-2=\dfrac{5}{x+3}$