

<p>Subtracting Rational Expression</p> <p>Step 1 – Determine if the expressions have common denominator.</p> <p>YES – go to step 2</p> <p>NO – Rewrite each rational expression with the LCD</p> <p>Find the LCD</p> <p>Rewrite each rational expression as an equivalent rational expressions with the LCD</p> <p>Step 2 – Subtract the rational expressions</p> <p>Step 3 – Simplify, if possible</p>	$\frac{2n}{n^2-3n-10} + \frac{6}{n^2+5n+6}$ $\frac{4(y-4)}{(y-4)(y+4)}$ <p>Subtract:</p> $\frac{4}{y+4}$ $\frac{8y}{y^2-16} - \frac{4(y+4)}{y-4}$ $\frac{2x}{x^2-4} - \frac{1}{x+2}$ $\frac{8y+0}{(y-4)(y+4)} - \frac{4y+16}{(y-4)(y+4)}$ $\frac{4y-16}{(y-4)(y+4)}$ $\frac{3}{z+3} - \frac{6z}{z^2-9}$ $\frac{-3n-9}{n^2+n-6} - \frac{n+3}{2-n}$ $\frac{3x-1}{x^2-5x-6} - \frac{2(x+1)}{6-x}$ $\frac{3x-1}{(x-6)(x+1)} + \frac{2x+2}{(x-6)(x+1)}$ $\frac{5x+1}{(x-6)(x+1)}$ $\frac{5c+4}{c-2} - \frac{3(c-6)}{c-2}$ $\frac{2c+10}{c-2}$ <p>Simplify</p> $\frac{(2u)^2}{u-1} + \frac{u-1}{u} - \frac{2u-1}{u^2-u}$ $\frac{2u^2}{u(u-1)} + \frac{u-1}{u(u-1)} - \frac{2u-1}{u(u-1)}$ $\frac{2u^2-u}{u(u-1)}$ $\frac{v}{v+1} + \frac{3}{v-1} - \frac{6}{v^2-1}$ $\frac{u(2u-1)}{u(u-1)}$ $\frac{2u-1}{u-1}$
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$$\frac{(3w)(w+7)}{w+2} + \frac{(2)(w+2)}{w+7} - \frac{17w+4}{w^2+9w+14}$$

$$\frac{3w^2+21w}{(w+2)(w+7)} + \frac{2w+4}{(w+2)(w+7)} - \frac{17w+4}{(w+2)(w+7)}$$

$$\frac{3w^2+6w}{(w+2)(w+7)} = \frac{3w(w+2)}{(w+2)(w+7)} = \frac{3w}{w+7}$$

$$\frac{4m}{m^2+6m-7} + \frac{2}{m^2+10m+21}$$

$$\frac{2x}{x+5} + \frac{3}{x-3} - \frac{13x+15}{x^2+2x-15}$$