

Because $x^2 - 5x + 6 = (x - 2)(x - 3)$, this is the least common denominator.

$$\begin{aligned} \frac{3x-2}{x-2} - \frac{x-1}{x^2-5x+6} &= \frac{(3x-2)(x-3)}{(x-2)(x-3)} - \frac{x-1}{(x-2)(x-3)} = \\ \frac{3x^2-11x+6}{x^2-5x+6} - \frac{(x-1)}{x^2-5x+6} &= \\ = \frac{3x^2-11x+6-x+1}{x^2-5x+6} &= \frac{3x^2-12x+7}{x^2-5x+6} \end{aligned}$$