Subtraction works the same way as addition. We still have to get a common denominator before anything can be combined. The only other thing to worry about is distributing a negative when needed.

Example: \[ \frac{3}{x-5} - \frac{5}{x} \]

We still need to get a common denominator, and we can only do that by multiplying the top and bottom of a fraction by the same thing.

\[
\frac{3 \cdot \frac{x}{x}}{x-5} - \frac{5 \cdot \frac{x}{x}}{x} = \frac{3 \cdot x}{(x-5) \cdot x} - \frac{5 \cdot x}{x \cdot (x-5)}
\]

Notice, if nothing factors, then nothing will cancel unless the top and part of the bottom are identical. In this case, it’s not.

Example:

\[
\frac{7}{x^2 + x} - \frac{5x}{x+1} = \frac{7}{x(x+1)} - \frac{5x}{x+1} = \frac{7}{x(x+1)} - \frac{5x \cdot (x+1)}{(x+1) \cdot (x+1)}
\]

The top cannot be factored in this case either, so nothing can be simplified. Try one on your own:

Simplify: \[ \frac{x-1}{x} - \frac{8}{x+5} \]