You may have tried to divide term by term, but this is the incorrect order of operations. Multiply the numerator and denominator by the LCD of all of the terms:

$$\frac{1 + \frac{3}{x} - \frac{10}{x^2}}{1 - \frac{1}{x} - \frac{30}{x^2}} \cdot \frac{x^2}{x^2}$$

Distribute the x^2 to all the terms. The expression will no longer be complex and can be simplified by factoring and identifying common factors.