$$\frac{-8}{x-2} + \frac{2-3x}{x}$$

1) You have to rewrite with a common denomiantor.

    1a) Multiply $\dfrac{-8}{x-2}$ by $\dfrac{x}{x}$ to get $\dfrac{-8x}{x(x-2)}$

    1b) Multiply $\dfrac{2-3x}{x}$ by $\dfrac{x-2}{x-2}$ to get $\dfrac{(2-3x)(x-2)}{x(x\text{-}2)}$

2) Form the sum from steps 1a) and 1b) above.

    2a) $\dfrac{-8}{x-2} + \dfrac{2-3x}{x} = \dfrac{-8x}{x(x-2)} + \dfrac{(2-3x)(x\text{-}2)}{x(x\text{-}2)} = \dfrac{-8x+(2-3x)(x\text{-}2)}{x(x\text{-}2)}$

    2a) Multiply (2-3x) by (x-2) using FOIL to get $-3x^2 + 8x - 4$

3) Simplify the numerator.

    $\dfrac{-8}{x-2} + \dfrac{2-3x}{x} = \dfrac{-8x-3x^2+8x\text{-}4}{x(x\text{-}2)} = \dfrac{-3x^2-4}{x(x-2)}$