

$$4. a) \frac{4-x}{2} = \frac{2}{x} \Rightarrow (4-x)x = 2 \times 2 \Rightarrow 4x - x^2 = 4 \Rightarrow x^2 - 4x + 4 = 0 \Rightarrow (x-2)^2 = 0 \Rightarrow x = 2$$

$$b) \frac{2x^2 - 5x + 2}{\frac{2x-1}{3}} = 2x-3 \Rightarrow \frac{2\left(x-\frac{1}{2}\right)(x-2)}{\frac{2x-1}{3}} = 2x-3 \Rightarrow \frac{(2x-1)(x-2)}{\frac{2x-1}{3}} = 2x-3 \Rightarrow \frac{x-2}{\frac{1}{3}} = 2x-3 \Rightarrow$$

$$\Rightarrow 3(x-2) = 2x-3 \Rightarrow 3x-6 = 2x-3 \Rightarrow x = 3$$

$$c) \frac{\frac{x+1}{1} - \frac{x-1}{1}}{\frac{x+1}{x+1} + \frac{x-1}{x-1}} = x-2 \Rightarrow \frac{\frac{(x+1)(x+1) - (x-1)(x-1)}{(x-1)(x+1)}}{\frac{(x-1)+(x+1)}{(x+1)(x-1)}} = x-2 \Rightarrow \frac{(x+1)(x+1) - (x-1)(x-1)}{(x-1)+(x+1)} = x-2 \Rightarrow$$

$$\Rightarrow \frac{(x^2 + 2x + 1) - (x^2 - 2x + 1)}{2x} = x-2 \Rightarrow \frac{4x}{2x} = x-2 \Rightarrow 2 = x-2 \Rightarrow x = 4$$