

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

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

$$(x-2) * (x-1) + 2x = (x-1) * (x) + 2$$

$$x^2 - 3x + 2 + 2x = x^2 - 1x + 2$$

$$x^2 - 1x + 2 = x^2 - 1x + 2$$