Alex Vasiuk DM #2

Divide Pair Conquer 02

$$f: Z^+ * Z^+ \to Z^+$$

$$f(m,n) = \frac{(m+n-2)(m+n-1)}{2} + m$$

Solve: $f(x-1,1)+1 = f(1,x) \Rightarrow \frac{x(x-1)}{2}+1$

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

$$= \frac{(x-2)(x-1)}{2} + x = \frac{x^2-3x+2+2x}{2} =$$

$$= \frac{x^2}{2} - \frac{x}{2} + \frac{2}{2} = \frac{x^2-x}{2} + 1 =$$

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