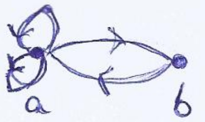

(⊛) Continuare

$$\chi_{A \cup (\bigcap_{i\in J} A_i)} = \max\{\chi_A, \chi_{\bigcap_{i\in J} A_i}\} : T \to \{0,1\},$$

$$(\forall x\in T)\ \max(\{\chi_A, \chi_{\bigcap_{i\in J}A_i}\})(x) = \max\{\chi_A(x), \chi_{\bigcap_{i\in J}A_i}(x)\}.$$

$$\chi_{\bigcap_{i\in J} A_i} = \min\{\chi_{A_i} \mid i\in J\} : T\to\{0,1\},$$

$$(\forall x\in T)\ \min(\{\chi_{A_i}\mid i\in J\})(x) = \min\{\chi_{A_i}(x) \mid i\in J\}$$

$$\Rightarrow \underbrace{\chi_{A\cup(\bigcap_{i\in J} A_i)}}_{\overset{not}{=}\ F} = \max\{\chi_A, \min\{\chi_{A_i}\mid i\in J\}\} : T\to\{0,1\}$$

$$G: T\to\{0,1\},\quad G \overset{not}{=} \chi_{\bigcap_{i\in J} (A\cup A_i)} = \min\{\chi_{A\cup A_i}\mid i\in J\} = \min\{\max\{\chi_A,\chi_{A_i}\}\mid i\in J\}$$

Dem că: $F = G$

Fie $x\in T$, arbitrar, fixat

Caz 1: $x\in A \Leftrightarrow \chi_A(x) = 1 \Rightarrow F(x) = \max\{1, \overbrace{\min\{\underbrace{\chi_{A_i}(x)}_{\in\{0,1\}}\mid i\in J\}}^{\in\{0,1\}}\} = 1$

$$\Downarrow$$

$$G(x) = \min\{\max\{1, \overbrace{\chi_{A_i}(x)}^{\in\{0,1\}}\}\mid i\in J\} = \min\{1\mid i\in J\} = 1$$

$\Rightarrow F(x) = G(x)$