$\Rightarrow$ ~~$\mathcal{F}$~~ $\mathcal{F}$ închis la majorări

$\Rightarrow \mathcal{F} \in \mathcal{F}(\mathcal{P}(T))$

$\sim_{\mathcal{F}} \in (\mathcal{P}(T))^2, (\forall A, B \in \mathcal{P}(T))$ $\quad |A \Delta B| < \infty$

$A \sim_{\mathcal{F}} B \overset{def}{\Longleftrightarrow} A \leftrightarrow B \in \mathcal{F} \Leftrightarrow |\overline{A \leftrightarrow B}| < \infty$

$A \leftrightarrow B = (A \to B) \cap (B \to A) = (\bar{A} \cup B) \cap (\bar{B} \cup A) \Rightarrow$

$\Rightarrow \overline{A \leftrightarrow B} = \overline{(\bar{A} \cup B)} \cup \overline{(\bar{B} \cup A)} = (\bar{\bar{A}} \cap \bar{B}) \cup (\bar{\bar{B}} \cap \bar{A}) = (A \cap \bar{B}) \cup (B \cap \bar{A}) =$

$= (A \setminus B) \cup (B \setminus A) = A \Delta B$

Prin urmare $A \sim_{\mathcal{F}} B \Leftrightarrow \underset{\text{diferența simetrică}}{A \Delta B}$ este finită.

- Clasele de congruență determină mulț. factor
- B - alg. Boole

$\mathcal{F} \in \mathcal{F}(B)$

$\underbrace{\sim_{\mathcal{F}} \in \mathcal{C}(B)}_{\subseteq \mathrm{Echiv}(B)}$

$(\forall x \in B) \; \underset{\text{clasa lui } x \,(\mathrm{mod}\, \mathcal{F})}{x/_{\mathcal{F}}} \overset{not}{=} \{y \in B \mid x \sim_{\mathcal{F}} y\}$

$\{x/_{\mathcal{F}} \mid x \in B\} = B/_{\sim_{\mathcal{F}}} \overset{not}{=} B/_{\mathcal{F}}$

$(\forall x, y \in B) \quad x/_{\mathcal{F}} \vee y/_{\mathcal{F}} :\overset{def}{=} (x \vee y)/_{\mathcal{F}}$

$x/_{\mathcal{F}} \wedge y/_{\mathcal{F}} :\overset{def}{=} (x \wedge y)/_{\mathcal{F}}$

$\overline{x/_{\mathcal{F}}} :\overset{def}{=} \bar{x}/_{\mathcal{F}}$

$0 :\overset{def}{=} 0/_{\mathcal{F}}$

$1 :\overset{def}{=} 1/_{\mathcal{F}}$

$(\forall x, y, x', y' \in B)$ a.î. $x/_{\mathcal{F}} = x'/_{\mathcal{F}} \Leftrightarrow x \sim_{\mathcal{F}} x' \Rightarrow \bar{x} \sim_{\mathcal{F}} \bar{x}'$

și $y/_{\mathcal{F}} = y'/_{\mathcal{F}} \Leftrightarrow y \sim_{\mathcal{F}} y'$