REZ:

$(\forall \alpha \in X)\ \inf(X) \le \alpha \xrightarrow{(f\uparrow)} f(\inf(X)) \le f(\alpha),\ \forall \alpha \in X \Rightarrow$

$\Rightarrow f(\inf(X)) \le \inf(f(X))$ $(*)$

Dacă f → izom de poseturi: not. $b := \inf(f(X)) \in B \xrightarrow{(\exists f^{-1})} f^{-1}(b) = a \in A$ $(f(a) = b)$ $\Rightarrow$

$\Rightarrow (\forall \alpha \in X)\ b \le f(\alpha) \xrightarrow{(f^{-1}\uparrow)} a = f^{-1}(b) \le f^{-1}(f(\alpha)) = \alpha \Rightarrow$

$\Rightarrow a \le \inf(X) \xrightarrow{f\uparrow} b = f(a) \le f(\inf(X))$ $(**)$

$b = \inf(f(X))$

$(*), (**) \Rightarrow f(\inf(X)) = \inf(f(X))$.

Rezultatele pt supremum se obțin din cele pt infimum prin dualitate