Proposition 3.232. [1Z9] *If we now fix a family $\mathcal{F}$ of sets of interest, we first define the relation $A \sim B \iff |A| = |B|$ in it; it is easily shown that this is an equivalence relation; so we get that $|A| \leq |B|$ is a total order in $\mathcal{F}/\sim$.*

Proof. This derives from the Proposition [1Z7], since the relation

$$ARB \iff |A| \leq |B|$$

is reflexive and transitive, and by Cantor–Bernstein's Theorem

$$|A| \leq |B| \wedge |B| \leq |A| \iff A \sim B \quad .$$

□