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A proof that form 341 implies form 10. Form 341 states: Every Lindelöf metric space is second countable, and [10 A] is: $UT(\aleph_0, < \aleph_0, \aleph_0)$: The union of denumerably many pairwise disjoint finite sets is denumerable. Let $A = \{A_i : i \in \omega\}$, where each A_i is finite and the A_i 's are pairwise disjoint. Let X be the one point compactification of $\bigcup A$ with the discrete topology. The space X is Lindelöf, so by 341, X is second countable. This implies that $\bigcup A$ is countable, which implies that there is a choice function on A .