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On the n-fold symmetric product of a space with a σ-(P)-property cn-network (ck-network)

Abstract: We study the relation between a space X satisfying certain generalized metric properties and its n-fold symmetric product $\mathcal{F}_n(X)$ satisfying the same properties. We prove that X has a σ-(P)-property cn-network if and only if so does $\mathcal{F}_n(X)$. Moreover, if X is regular then X has a σ-(P)-property ck-network if and only if so does $\mathcal{F}_n(X)$. By these results, we obtain that X is strict σ-space (strict $\aleph$-space) if and only if so is $\mathcal{F}_n(X)$.

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