

Scattered P-spaces of weight ω_1

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Following M. Fréchet, if a space X can be embedded into a space Y , then we write $X \subset_h Y$. If $X \subset_h Y$ and $Y \subset_h X$, then we say that X and Y have the same *topological rank* (K. Kuratowski) or *dimensional type* (W. Sierpiński). Such relations are used in, for example, considering topological inclusion relation ([1], [2]). It is also a problem interesting in itself, as can be seen from [4], where the author has described the ordering \subset_h in the class of all separable and scattered metric spaces. We consider the ordering \subset_h in the class of all scattered P-spaces of weight ω_1 , where a P-space is a regular space such that its G_δ sets are open. Moreover, in this case it suffices to examine subspaces of the ordinal number ω_2 , as every scattered P-space of weight ω_1 is homeomorphic to such a subset.

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