

1044-54-72

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Coconnected Spaces and Cleavability.

A space X is said to be coconnected if $|X| > 1$ and for every connected subset C , $X \setminus C$ is connected. It is established that every coconnected space can be mapped onto a coconnected compactum by a continuous bijection. Also every coconnected compactum is the union of two linearly ordered continua intersecting only at end points. In particular every separable compact coconnected space is homeomorphic to S^1 . Every continuum that is cleavable over the class of coconnected spaces together with the class of LOTS embeds into a coconnected space. Thus cleavability of continua over the class of LOTS can be generalized to cleavability over coconnected spaces and their connected subsets. In the special case of S^1 , I show that if a space is locally compact, connected and cleavable over S^1 or separable, locally connected, connected and cleavable over S^1 then it embeds into S^1 . (Received August 18, 2008)