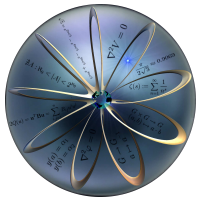

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hedgehog space

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For any cardinal number K, we can form a topological space, called the *K-hedgehog space*, consisting of the disjoint union of K real unit intervals identified at the origin. Each unit interval is referred to as one of the hedgehog's "spines."

The hedgehog space admits a somewhat surprising metric, by defining $d(x, y) = |x - y|$ if x and y lie in the same spine, and by $d(x, y) = x + y$ if x and y lie in different spines.

The hedgehog space is an example of a Moore space, and satisfies many strong normality and compactness properties.

References

[1] L.A. Steen, J.A.Seebach, Jr., *Counterexamples in topology*, Holt, Rinehart and Winston, Inc., 1970.