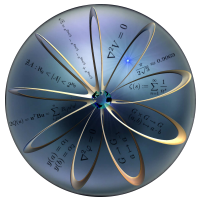

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uniform structure of a topological group

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Defines	left uniformity

Let G be a topological group. There is a natural uniform structure on G which induces its topology. We define a subset V of the Cartesian product $G \times G$ to be an entourage if and only if it contains a subset of the form

$$V_N = \{(x, y) \in G \times G : xy^{-1} \in N\}$$

for some N neighborhood of the identity element. This is called the *right uniformity* of the topological group, with which multiplication becomes a uniformly continuous map. The *left uniformity* is defined in a fashion, but in general they don't coincide, although they both induce the same topology on G.