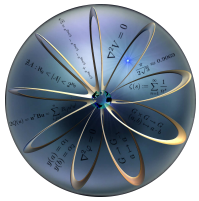

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topological group (obsolete)

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This entry is obsolete, having been superseded by `http://planetmath.org/TopologicalGroup` *new entry. It is being retained for a short while because of the attached thread.*

A *topological group* is a triple $(G, \cdot, \mathcal{T})$ where $(G, \cdot)$ is a group and $\mathcal{T}$ is a topology on G such that under $\mathcal{T}$, the group operation $(x, y) \mapsto x \cdot y$ is continuous with respect to the product topology on $G \times G$ and the inverse map $x \mapsto x^{-1}$ is continuous on G.

Many authors require that the topology be Hausdorff.