

A study of the smooth manifold \mathbb{L}_+^2

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Abstract

In every branch of mathematics we are coming across the concept called ‘manifold’ and nowadays mathematicians are primarily interested in smooth manifolds in their research. In Topology, the Long Line \mathbb{L} and open Long Ray \mathbb{L}_+ are the two non-metrisable manifolds which are also smooth. Here, the obvious question arises what makes a manifold a smooth or differentiable manifold? This talk will give an explanation related to the above question and thereby discuss an initial finding while searching for an answer to the possibility of any non-product smoothing on the Long plane \mathbb{L}_+^2