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invariance of dimension

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The following non-trivial result was proven by Brouwer [?] around 1910 [?].

Theorem (Invariance of dimension) Suppose U and V are open subsets of \mathbb{R}^n respectively \mathbb{R}^m . If U and V are non-empty and homeomorphic, then $n = m$.

References

- [1] The MacTutor History of Mathematics archive,
<http://www-gap.dcs.st-and.ac.uk/history/Mathematicians/Brouwer.html> entry
on Luitzen Egbertus Jan Brouwer
- [2] A. Hatcher, *Algebraic Topology*, Cambridge University Press, 2002. Also available
<http://www.math.cornell.edu/hatcher/AT/ATpage.html> online.