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Självständigt arbete i matematik

Matematiska institutionen

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Pejman Altafi: Borsuk's conjecture and an introduction to combinatorial geometry

Sammanfattning

In the year 1933, the Polish mathematician Karol Borsuk conjectured that an n -dimensional body of diameter d can always be partitioned into $n + 1$ parts, each having diameter less than d . Over half a century later, this geometrical conjecture was finally proved to be false in general, with the help of combinatorial arguments. However, there are special cases for which the conjecture holds. Borsuk's Conjecture is the main topic of this paper. At the same time, the paper aims at giving an introduction to the field of Combinatorial Geometry.