



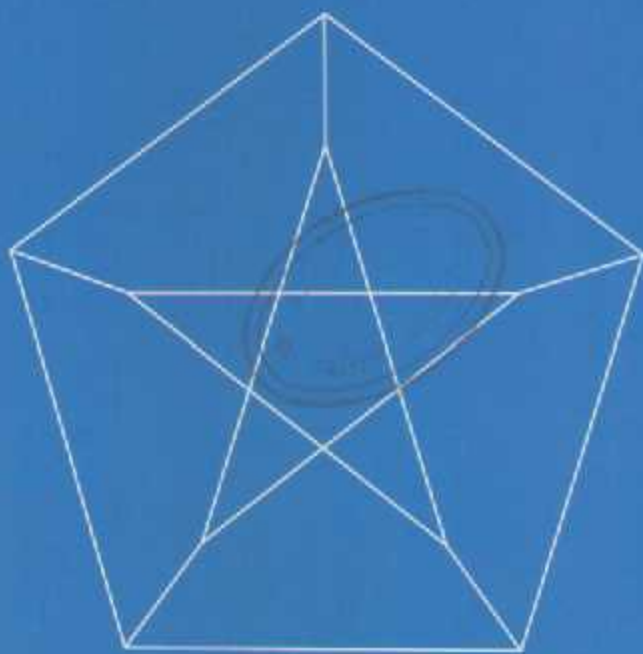
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Construction of planar triangulations with minimum degree 3

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Abstract

In this article, we describe an algorithm for constructing all triangulations of the sphere with minimum degree 3. We describe the construction of the graph and the algorithm for generating all triangulations of minimum degree 3.

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Keywords: Planar triangulation; Graph generation; Combinatorics

1. Introduction

A planar graph is called a *triangulation* if each of its faces is a triangle. In this paper, we consider triangulations of the sphere. A triangulation of the sphere is a planar graph embedded in the plane such that every edge of the graph is on the boundary of a triangle. The set of all triangulations of the sphere is denoted by \mathcal{T}_n . The set of all triangulations of the sphere with minimum degree 3 is denoted by \mathcal{T}_n^3 .

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