

Combinatorial Problems Raised by Statistical Mechanics
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Scaling functions and generating functions for punctured polygons

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Abstract

We consider staircase polygons and self-avoiding polygons with punctures (that is to say, internal holes which are themselves polygons). We give conjectured exact perimeter generating functions in some cases, and conjectured exact scaling functions for the perimeter-area generating function in the vicinity of the point $x = x_c$, $q = 1$, where x is conjugate to the perimeter and q is conjugate to the area.

Joint work with Christoph Richard and Iwan Jensen