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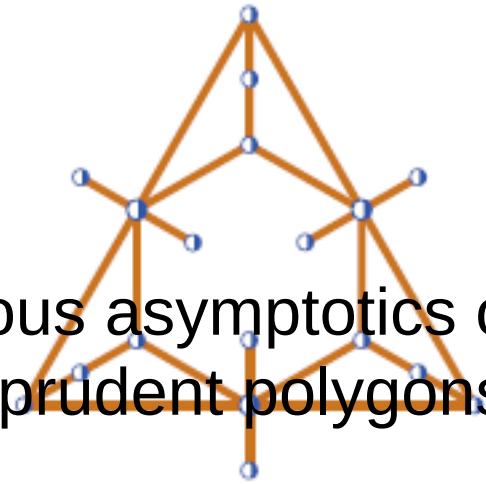

The curious asymptotics of 3-sided prudent polygons

Content :

In joint work with Nick Beaton (PhD student) and Philippe Flajolet, we have studied a range of solvable self-avoiding walk and polygon models. One of these, the so-called 3-sided prudent polygons, enumerated by area, displays quite unexpected asymptotics. Writing the dominant asymptotic form of the coefficients as $a_n \sim A \times \mu^n \times n^g,$ we find g to be irrational, and more surprisingly, A does not exist, due to the presence of long-period, small amplitude oscillatory component. We discuss this model and other models in this family.

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