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A combinatorial generalisation of Cramer's rule

We review a result of G. X. Viennot, *Lecture Notes in Mathematics* **1234**(1986), and comment on its significance for statistical mechanics: a ratio of generating functions for disjoint oriented loops in a finite graph can be expressed in terms of the generating function of a single path in the graph weighted according to loops in the path. The result is a generalisation of Cramer's formula for the inverse of a matrix.