

**Chao, Chongyun; Li, Nianzu**

**On trees of polygons.** (English) Zbl 0575.05027

Arch. Math. 45, 180-185 (1985).

The set  $S$  of  $n$ -gon-trees is defined recursively as follows: (a) The  $n$ -gon is in  $S$ . (b) If  $G$  is in  $S$ , then so is any graph formed by identifying an edge of  $G$  with an edge of an  $n$ -gon. The authors prove that a graph is an  $n$ -gon-tree on  $k$ -gons if and only if its chromatic polynomial is

$$[(\lambda - 1)^n + (-1)^n(\lambda - 1)]^k / [\lambda(\lambda - 1)]^{k-1}.$$

[Reviewer's comments: The elaborate definition of  $Q(C_n, \lambda)$  in Lemma 5 is unnecessary. Corollary 1.1 is a result due to *G. H. J. Meredith* [J. Comb. Theory, Ser. B 13, 14-17 (1972; [Zbl 0218.05056](#))].]

Reviewer: [R.C.Read](#)

**MSC:**

**05C15** Coloring of graphs and hypergraphs

Cited in **1** Review  
Cited in **9** Documents

**Keywords:**

[n-gon-trees](#); [chromatic polynomial](#)

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**References:**

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