

On the Number of Colorings of a Graph

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Let $\mathcal{C}_k(n)$ be the family of all connected k -chromatic graphs of order n . We discuss recent results on the following problem: given a natural number $x \geq k$, what is the maximum number of x -colorings among graphs in $\mathcal{C}_k(n)$?

MSC2000: 05C15, 05C30, 05C31.

Keywords: graph coloring, chromatic polynomial.