

On Chromaticity of Wheels

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Abstract : Let the vertices of a graph such that every two adjacent vertices have different color is a very common problem in the graph theory. This is known as proper coloring of graphs. The possible number of different proper colorings on a graph with a given number of colors can be represented by a function called the chromatic polynomial. Two graphs G and H are said to be chromatically equivalent, if they share the same chromatic polynomial. A Graph G is chromatically unique, if G is isomorphic to H for any graph H such that G is chromatically equivalent to H. The study of chromatically equivalent and chromatically unique problems is called chromaticity. This paper shows that a wheel W_{12} is chromatically unique.

Keywords : chromatic polynomial, chromatically equivalent, chromatically unique, wheel

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