

GRAPHIC AND COGRAPHIC Γ -EXTENSIONS OF BINARY MATROIDS

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Abstract

Slater introduced the point-addition operation on graphs to characterize 4-connected graphs. The Γ -extension operation on binary matroids is a generalization of the point-addition operation. In general, under the Γ -extension operation the properties like graphicness and cographicness of matroids are not preserved. In this paper, we obtain forbidden minor characterizations for binary matroids whose Γ -extension matroids are graphic (respectively, cographic).

Keywords: splitting, Γ -extension, graphic, cographic, minor.

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