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ON THE NUMBERS OF CUT-VERTICES AND END-BLOCKS IN 4-REGULAR GRAPHS

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Abstract

A *cut-vertex* in a graph G is a vertex whose removal increases the number of connected components of G. An *end-block* of G is a block with a single cut-vertex. In this paper we establish upper bounds on the numbers of end-blocks and cut-vertices in a 4-regular graph G and claw-free 4-regular graphs. We characterize the extremal graphs achieving these bounds.

Keywords: 4-regular graph, claw-free, cut-vertices, end-blocks.

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