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Lower bounds for the complexity of restrictions of Boolean functions. (English)

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Given a Boolean function f and a set M of domains, the circuit size complexity of the most complicated restriction of f to some domain in M is studied. Upper and lower bounds, depending on the domain size, are established for wide classes of Boolean functions. Similar results for other complexity measures (e.g., formula size) are given.

Reviewer: Heribert Vollmer (Würzburg)

MSC:

94C10 Switching theory, application of Boolean algebra; Boolean functions (MSC2010)

Cited in 1 Document

68Q25 Analysis of algorithms and problem complexity

03D15 Complexity of computation (including implicit computational complexity)

Keywords:

Boolean function; circuit size complexity

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