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**Counting complexity of propositional abduction.** (English) Zbl 1197.68072  
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Summary: Abduction is an important method of nonmonotonic reasoning with many applications in artificial intelligence and related topics. In this paper, we concentrate on propositional abduction, where the background knowledge is given by a propositional formula. Decision problems of great interest are the existence and the relevance problems. The complexity of these decision problems has been systematically studied while the counting complexity of propositional abduction has remained obscure. The goal of this work is to provide a comprehensive analysis of the counting complexity of propositional abduction in various settings.

**MSC:**

**68T27** Logic in artificial intelligence  
**68Q25** Analysis of algorithms and problem complexity

Cited in 4 Documents

**Keywords:**

computational complexity; counting complexity; propositional abduction; Horn; definite Horn; dual Horn; bijnunctive formulas

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