

Review of: "Impossibilities, mathematics, and logic"

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`\title {\bf Review on\ Impossibilities, mathematics, and logic\ by F. A. Mala}`

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`\noindent` In fact mathematics is some art and the tool for this art is proving. The author explains some generally known basic facts where proofs manifest statements either in positive or negative sense. But before a proof some idea, a conjecture, the formulation of a proposition is required. Naturally this is essential and how influential and inspiring proposals might be have shown e.g. the last Fermat theorem, the Bieberbach conjecture, Hilbert's 23 problems from 1900. As difficult and complicated proofs can be even for simply expressible statements, also disproofs of conjectures via counterexamples are not at all trivial. By the way, the computer-caused counter-example for the Euler conjecture is misspelled in the article: the last digits of each number in the relation should be powers.

However, there are mathematical statements which are not decidable, not even with help of computers. Some easily accessible examples are explained in

Goodman-Strauss, C. "Can't Decide? Undecide!" Notices of the American Mathematical Society 57 (2010), 343–356.

Gödel's incompleteness theorems, one of the most important contributions to mathematics, in mathematical logic, in the past century is also addressed in the paper.