

# What is "reverse" mathematics?

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**Abstract:** Reverse Mathematics is a program in mathematical logic that studies the axioms used to prove well-known theorems of mathematics. The program, now entering its 4th decade, initially focused on the undergraduate core theorems of analysis and algebra such as the Heine-Borel theorem. It has flourished in the past decade as the scope broadened to include combinatorics and topology. I will explain the core ideas of the program and some of its history. Along the way, we will look at examples of Reverse Mathematics results in graph theory and topology.