

This paper contains detailed description of two consistency proofs, which state that in the system called Peano arithmetic no contradiction can be obtained. The proofs were first published in 1936 and 1938 by the German mathematician Gerhard Gentzen. For the purpose of this paper, the proofs were read and studied from the original articles called "Die Widerspruchsfreiheit der reinen Zahlentheorie" and "Neue Fassung des Widerspruchsfreiheitsbeweises für die reine Zahlentheorie". The first mentioned proof is interesting from the historical point of view. Gentzen used a natural deduction sequent calculus and ordinal numbers in an unusual form he invented. The second proof is similar to the consistency proof, which is commonly known as a consistency proof for Peano arithmetic nowadays.