On the Schröder-Bernstein property

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Abstract

Among the various well known results, one that has generated much intrigue is the Schröder-Bernstein Theorem. The original theorem for sets states that any two sets with one to one maps into each other are isomorphic. The question whether any two (subisomorphic or) direct summand subisomorphic algebraic structures are isomorphic, has been of great interest. For example, Kaplansky (1954) asked whether direct summands subisomorphic abelian groups are always isomorphic? In general, it has been shown that the property does not hold true for most algebraic structures. This raises the question of when does this property hold true. We say that a module *M satisfies the Schröder-Bernstein property (S-B property)* if any two direct summands of *M* which are subisomorphic to direct summands of each other, are isomorphic. In this talk, we will discuss the S-B property for modules and related notions.