

Bichains

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Bichains are algebras with two operations meet and join where meet is the meet operation of some linear ordering of the underlying set, and join is the join operation of some linear ordering of the underlying set. These two linear orderings need not agree. If they do agree, the bichain is a lattice and is usually called a chain. Particular bichains arise in the study of the logic of type II fuzzy sets. In our efforts to understand this logic, we have been discovering properties of bichains in general. There are a number of aspects that involve work with automated theorem provers, and require little specialized background. This is joint work with Carol and Elbert Walker.