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Orderings and preorderings in rings with involution. (English) [Zbl 0961.16020](#)
Colloq. Math. 83, No. 1, 15-20 (2000).

The notion of an ordering on a general ring was described by *L. Fuchs* [Fundam. Math. 46, 167-174 (1959; [Zbl 0100.26701](#))] and the notion of an ordered skew field with involution was studied by *M. Chacron* [J. Algebra 75, 495-522 (1982; [Zbl 0482.16013](#))] and *S. S. Holland* [J. Algebra 101, 16-46 (1986; [Zbl 0624.06024](#))]. The author defines an ordering on a general ring with involution and establishes the expected conditions for its existence and extendibility to overrings. He also shows that when the ring is Archimedean, the symmetric elements generate a commutative subring.

Reviewer: [Paul M.Cohn \(London\)](#)

MSC:

[16W10](#) Rings with involution; Lie, Jordan and other nonassociative structures
[06F25](#) Ordered rings, algebras, modules
[16W80](#) Topological and ordered rings and modules

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Keywords:

Archimedean rings; orderings; rings with involutions; extendibility; symmetric elements; commutative subrings

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