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Computable Dimension of Ordered Fields.

In computable model theory, two computable structures can be isomorphic, yet lack any computable isomorphism between themselves. The computable dimension of a structure $\mathcal{A}$ counts the number of isomorphic, but not computably isomorphic, computable copies of $\mathcal{A}$. For instance, if the structure is an algebraically closed field, then the computable dimension is always either 1 or ω, depending on the transcendence degree of the field. In this talk we will explore the possibilities of computable dimension (and related notions) when the structures are ordered fields. (Received September 15, 2008)