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John R Harding* (jharding@nmsu.edu), Department of Mathematical Sciences, New Mexico State University, Las Cruces, NM 88003. *Orders and type 2 fuzzy sets.*

The truth value object of type 2 fuzzy sets is the set M of all functions from the unit interval to itself equipped with various operations obtained as convolutions of the operations max, min, and negation, on the unit interval. These operations lead to not one, but two partial orders on M . Here we address matters connected to these orderings on M , including natural subsets on which they coincide, resulting lattice structures, equational properties, and a third order obtained as the intersection of the given two. (Received September 05, 2012)