I^n-fuzzy sets and related fuzzy topologies - (1) *

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ABSTRACT.   For I^n-fuzzy sets on an ordinary nonempty set X, where $|X| \geq 2$, the concepts of relations "$\leq_a$", "$\leq_g$" and a complement operation with respct to $\leq_a$ are defined and investigated using the arithmitric means and the geometric means. And, this paper continues to the paper [7] (and [8]). In [7], we introduce new fuzzy topologies, say $\tau_{X,n;a}(\subset (I^n)^X)$ and $\tau_{X,n;g}(\subset (I^n)^X)$, from a given Chang topological space (X, τ_X) ; and we have some examples and problems.