Einführung in die Algebra
Prof. Dr. Günter Pilz
Übungsaufgaben 2

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Let L be a lattice. Let $x,y \in L$ be such that $x \leq y$. A ***closed interval*** is the set $[x,y]:]\{z \in L \mid x \leq z \leq y\}$. A closed interval of a lattice is itself a lattice.

The ***height*** of a finite lattice is the largest n such that there is a chain of elements $x_0 < x_1 < ... < x_n$.

Can you find a finite lattice L of height at least 3 such that every closed interval strictly smaller than L is a distributive lattice but L is not a distributive lattice?