

In this thesis after recalling some basic definitions and theorems in category theory, lattice theory and topology we first introduce the so called Stone duality of the category of boolean lattices and the category of boolean topological spaces. Then we introduce its generalization, the so called Priestley duality of the category of bounded distributive lattices and the category of total order disconnected topological spaces. Then we introduce the $M_3[.]$ lattice construction and prove that for every bounded distributive lattice L there is an isomorphism from the lattice $M_3[L]$ to the lattice of all continuous monotone maps from the Priestley space of L to the lattice M_3 with discrete topology. Finally we introduce the so called boolean power, which we generalize to the so called priestley power and we prove that for every natural number $n \geq 3$ and every bounded distributive lattice L there is an isomorphism from the lattice M_n to the priestley power of the lattice M_n by the lattice L .