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The separation theorem of weakly dicomplemented posets

E.G. Rezk* and M.M. Atallah

Abstract. The notion of a weakly dicomplemented partially ordered set (weakly dicomplemented poset) is introduced as a poset equipped with two unary operations. Dense (dual dense) and closed (dual closed) elements are defined on it. The concepts of \ast -filters and $\tilde{\ast}$ -ideals are introduced in weakly dicomplemented Posets. Certain properties of these kinds of filters and ideals are investigated. Relations between dense (dual dense) and closed (dual closed) elements on one side and \ast -filters, prime filters, $\tilde{\ast}$ -ideals, and prime ideals on the other side are shown. The separation theorem for \ast -filters and $\tilde{\ast}$ -ideals of weakly dicomplemented poset is proved.

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*Corresponding author