

Irving Kaplansky

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"How I got into commutative rings"

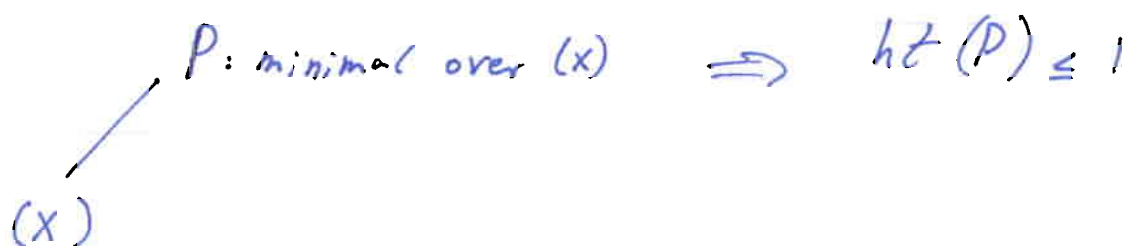
R valuation domain

M (unique) maximal ideal

R/M residue field

K^*/U lin. ordered group (value group)
(U : units in R)

Principal ideal theorem



R domain

R factorial \Leftrightarrow every nonzero prime ideal contains a principal prime ideal.