LECTURE 5

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1 Degree of polynomials in fields

$K[x]/f(x)$ where f(x) is irreducible. What is $[L : K]$? where $d = \delta f(x)$

$\bar{1}, \bar{x}, \bar{x}^2, \ldots, \bar{x}^{d-1}$ basis for L

$\bar{1} = 1 + < f >$

$\bar{x} = x + < f >$ spn L over K

$k(x)/ < f >$ is isomorphic to L