Rec 10/15

Tuesday, October 15, 2019 11:40

Thm $X \in R[x]$ is irreducible iff R is indecomposable.

eg $x = (2x+3)(3x+2)$ in $\mathbb{Z}_6[x]$, $\mathbb{Z}_6 = \mathbb{Z}_3 \oplus \mathbb{Z}_2$

$X \in \mathbb{Z}_4[x]$ is irreducible but not prime ($\mathbb{Z}_4[x]/(x) \cong \mathbb{Z}_4$).