Lec 10/23

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Thm Any ring is isomorphic to a ring of Endomorphisms of an abelian gp.

Pf Let R be a ring, $M = (R, +, 0)$.

Let $\Phi : R \longrightarrow \mathrm{End}\, M$

$a \longmapsto (x \mapsto ax)$ □

Note: $\tilde{\Phi} : a \longmapsto (x \mapsto xa)$ is an anti-homomorphism

reverses order of multiplication.

Let $(M, +, 0)$ be an ab gp, R a ring.

$R \curvearrowright M$ makes M an R-module.