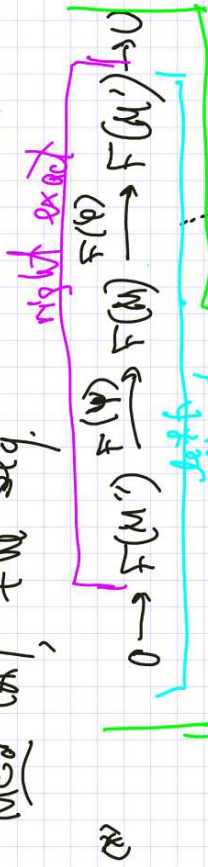


$E = (0 \rightarrow M' \xrightarrow{\psi} M \rightarrow M'' \rightarrow 0)$
 is $\text{Mod}(A)$, the seq.



(*)

as seq. in $\text{Mod}(R)$

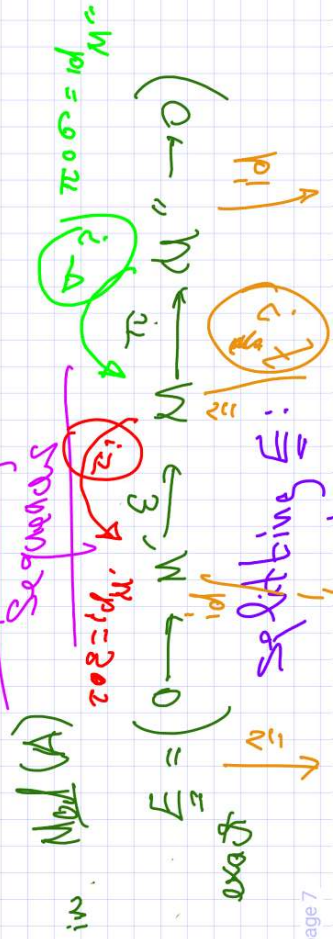
(**)



F is exact iff $L_i F = 0$ for all $i > 0$
 iff $R^i F = 0$ for all $i > 0$.

NEXT SEMESTER

Splitting Short exact



Remark The main point in (abelian) homological is to make sense (i.e. linear) or give meaning, to the failure of exactness of function.

given a linear function $F: \text{Mod}(A) \rightarrow \text{Mod}(B)$

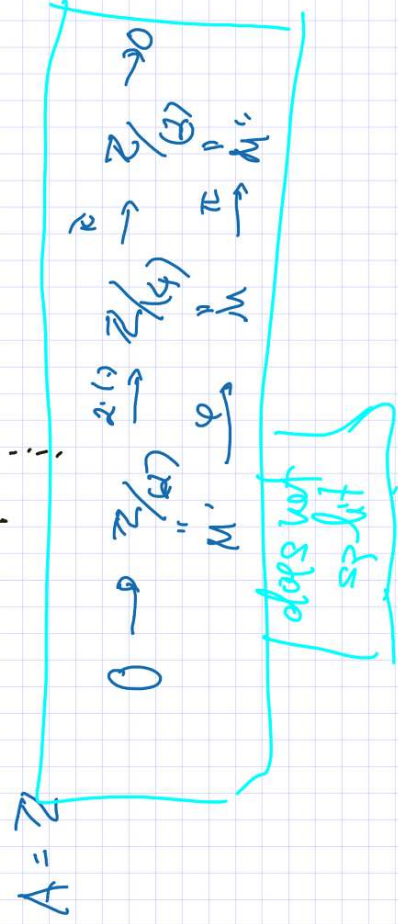
We will construct its left derived functors, which are lin. fun

ie $L_i F: \text{Mod}(A) \rightarrow \text{Mod}(B)$

$L_i F = H_{i-1}(F)$
 $R^i F = \text{Ext}^i(M, F)$

$$0 \rightarrow M' \rightarrow M' \oplus M \xrightarrow{[0, \text{id}]} M'' \rightarrow 0$$

exact
 have τ or a σ , or a τ , are equiv.



fund