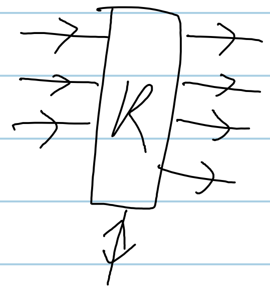
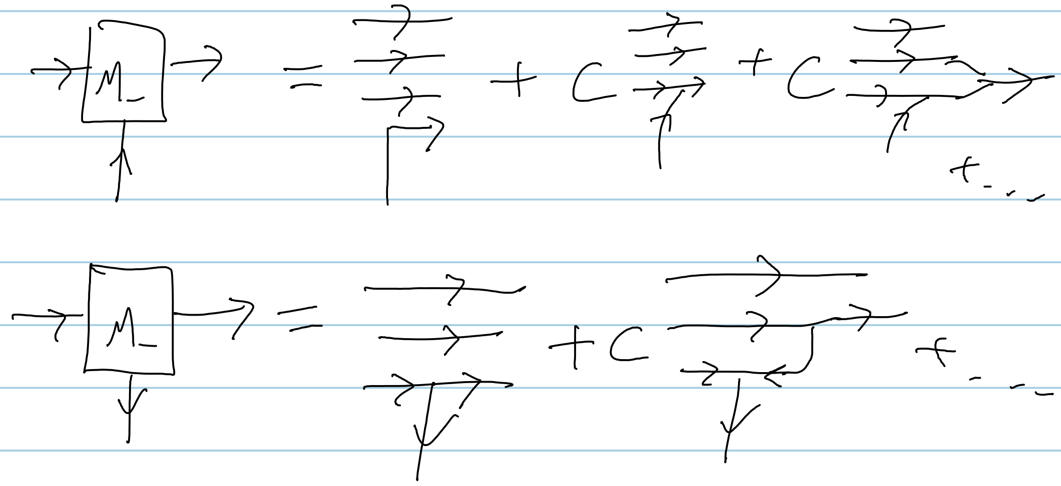
M- and M+*

July-07-11
2:35 PM

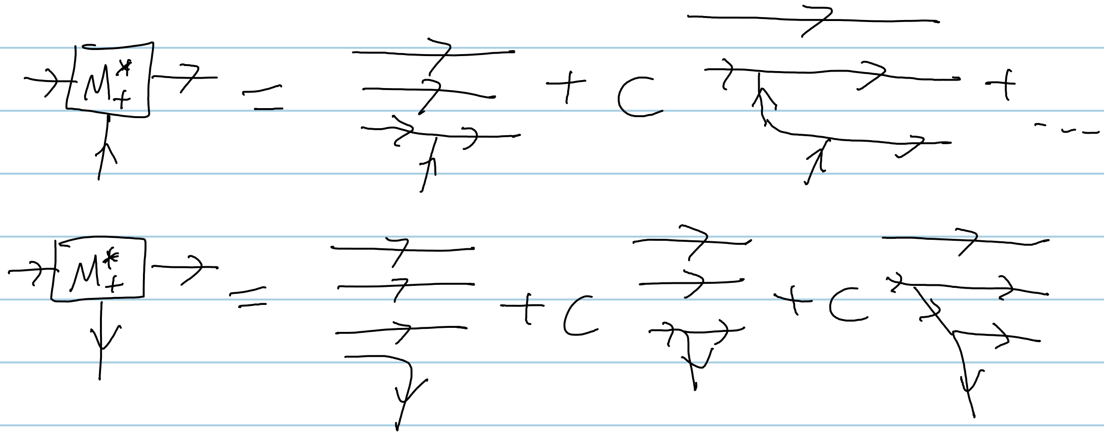
"A representation on $S(\mathfrak{g}_+)$"



M_-:



M_+^*:



The Θ Theorem: For every dimodule X,

$$\Theta : \mathrm{Hom}_M(M_- \otimes X_0 \to M_+^* \otimes X) \longrightarrow \mathrm{Hom}_V(X_0, X)$$

is an isomorphism, where

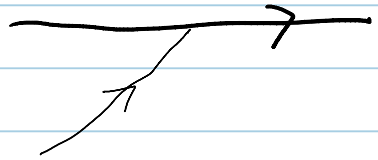
$$\begin{tikzcd} M_- \otimes X_0 \arrow[r, "F"] & M_+^* \otimes X \arrow[d] \\ X_0 \arrow[u, "1_- \otimes I"] \arrow[r, "\Theta(F)"] & X \end{tikzcd}$$

What's X_0? If it doesn't matter, it can be made universal.

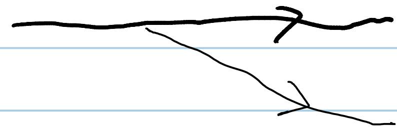
"Principle". Every "for every object" theorem in

$$\overset{I}{X_0} \xrightarrow{\theta(F)} \overset{V}{X}$$

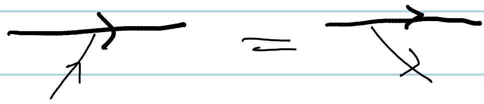
X_i has



and

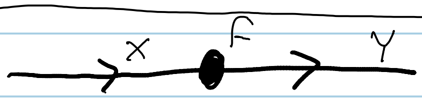


X_0: X modulo

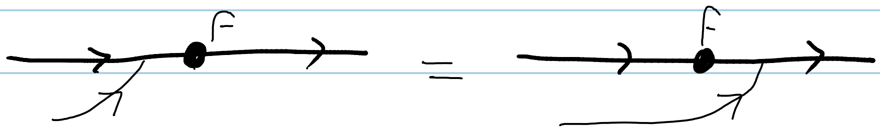


$= 0$

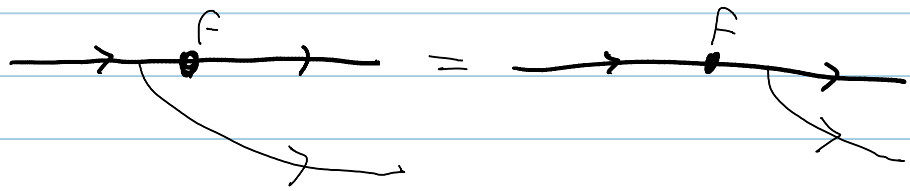
What's Hom_{M_0}?



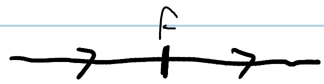
s.t.



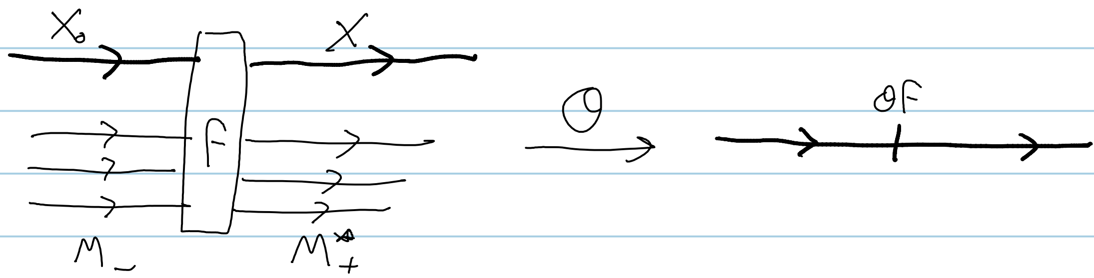
and



What's Hom_{V_0}?



w/ no conditions



"every 'object' theorem in mathematics can be replaced with "for the universal object".

This seems to be what I do for my money.