

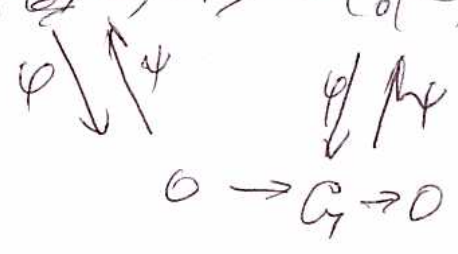
Math 8306 Lecture 12 (M 09.04.2004)

$$\dots \rightarrow C_n(C, G) \rightarrow \dots \rightarrow C_1(C, G) \rightarrow C_0(C, G) \rightarrow 0$$

$$\varepsilon : C_0 \rightarrow C$$

$$s : C_n \rightarrow C_{n+1}$$

$$ds + sd = id - \varepsilon$$



$$\varepsilon(\sum T_i \otimes g_i) = \varepsilon g_i *$$

$$\psi : \sum_{i=1}^k T_i \otimes g_i \mapsto \sum g_i$$

$$T_i : \Delta^0 \rightarrow C$$

$$g_i \in G$$

$$\psi : g \rightarrow g \otimes *$$

$$\psi \psi = id_{0 \rightarrow G \rightarrow 0}$$

$$\psi \psi = \varepsilon$$

ψ, ψ give you homotopic equivalence

$$\psi \psi = \varepsilon \sim id_C$$

$$H_0(C) = H_n(0 \rightarrow G \rightarrow 0)$$

$$= \begin{cases} G & n=0 \\ 0 & n \neq 0 \end{cases}$$