

since $\mathbb{R}S^{n+1}$ is $n-1$ conn, can

choose eq subex K_{n-1} whose $n-1$ skeleton = pt,

pick $\Theta z_n \in K_{n-1} \subseteq$ primitives

and define $\Theta(z_n^k) = (\Theta z_n)^k$.

comodule model for a space or simplicial set Y

over X : $C = C(X) \equiv X$; $f: Y \rightarrow X$;

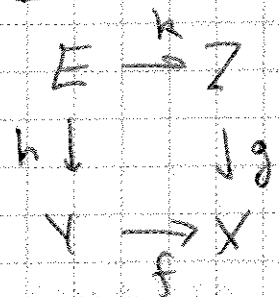
\downarrow seq of homology isom comodule maps terminating in $C(Y) \equiv Y$ with differential

comodule structure $Y \xrightarrow{\Delta} Y \otimes Y \xrightarrow{\text{id}} Y \otimes X$

How to make chain models for pullbacks

First attempt:

a) pullback diagram of spaces (s. sets):



$E = Y \times_X Z =$
equalizer

