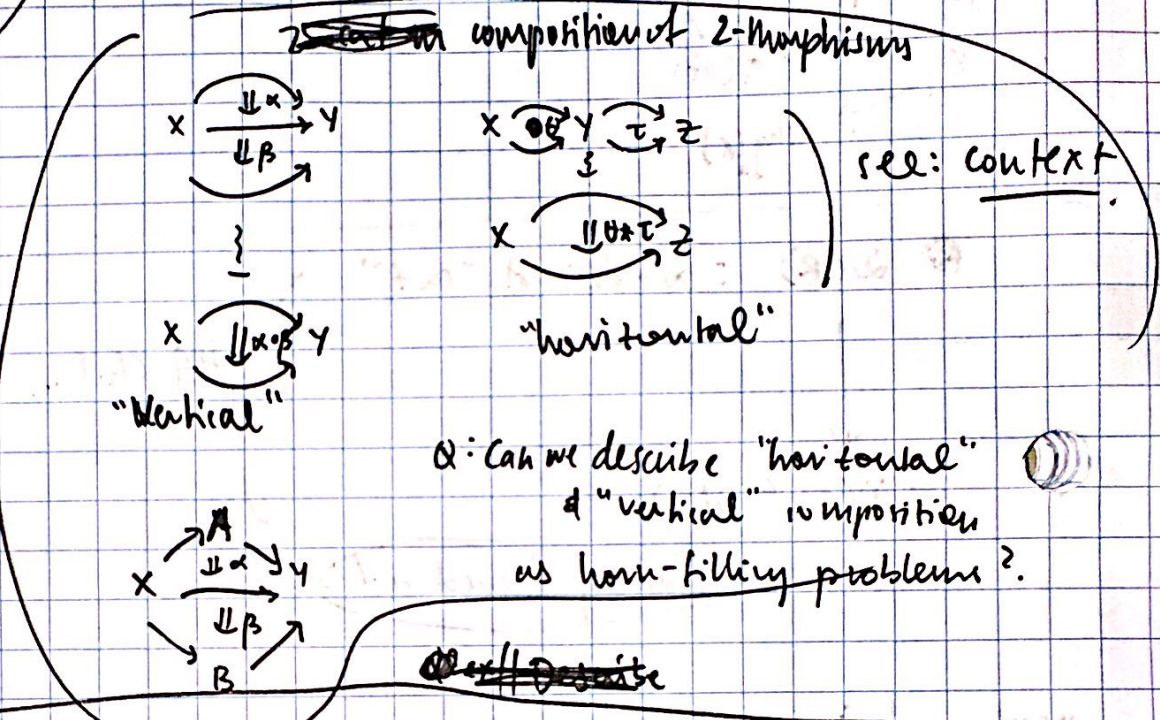
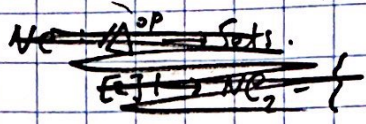
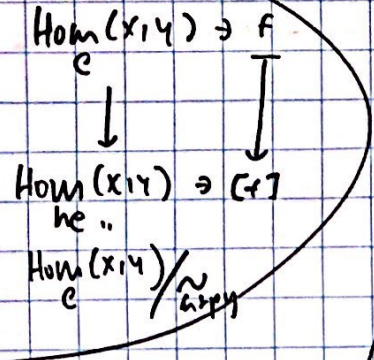


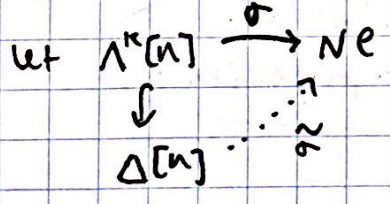
• Mazel-Gee: Quillen equivalences \Rightarrow equiv of ω -cats.

Q: How do Kan exts describe limits/colimits?
 • derived functors.
 • see Riehl (context).



ex// let c : ordinary cat.

\downarrow
 NE : the nerve of c ...

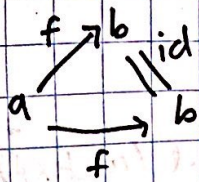


be a lifting problem.

What does $\sigma: \Lambda^n[n] \rightarrow NE$ represent in c ?

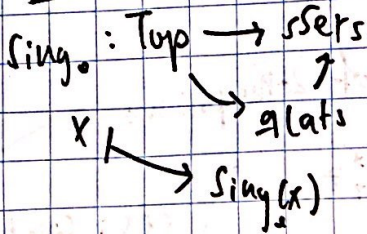
What does the lift $\tau: \Delta[n] \rightarrow NE$ represent in c ?

Does this type of problem correspond to composing 1-morphisms in the ordinary cat.?

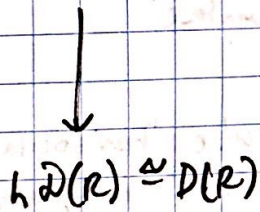


$$f \sim \text{id} \circ f \sim g$$

homotopy & homology.



• $\mathcal{D}(R) : \infty\text{-derived "cat"}$



ordinary derived cat.

HA Ch. 1.

next week:

- homological algebra
- ∞ -categories
- projective/injective

→ Ext/Tor

other models? (HTT Ch. 1)

(see Weibel Hom'1 Alg. book for desc. univ. properties.)