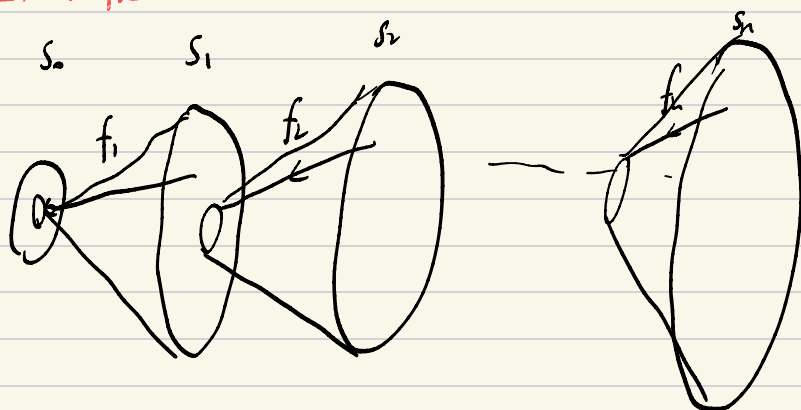
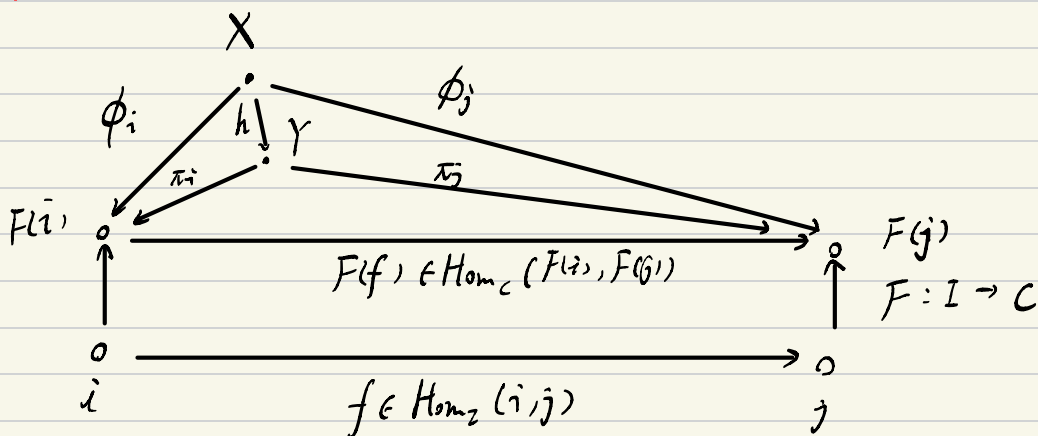



逆向极限

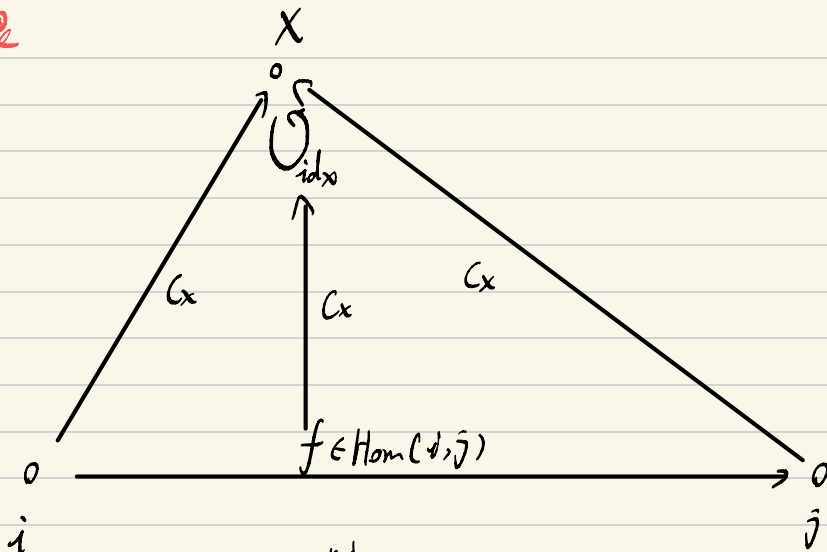


椎 (Cone)

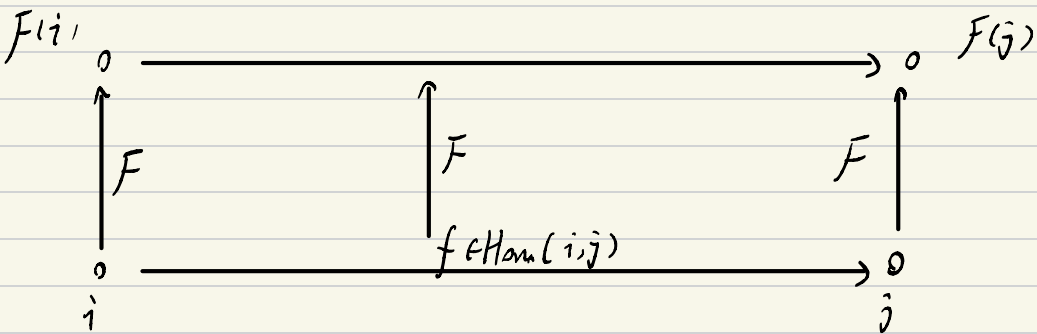


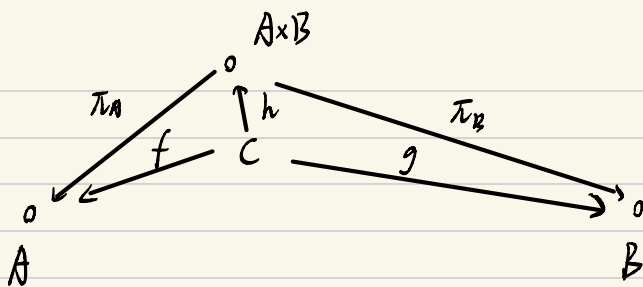
$\lim F$ 是范畴 $\text{Cone}(F)$ 的终对象

极限



$\Downarrow \{ \phi_i \}_{i \in I}$ 是 C_X 到 F 的自然变换

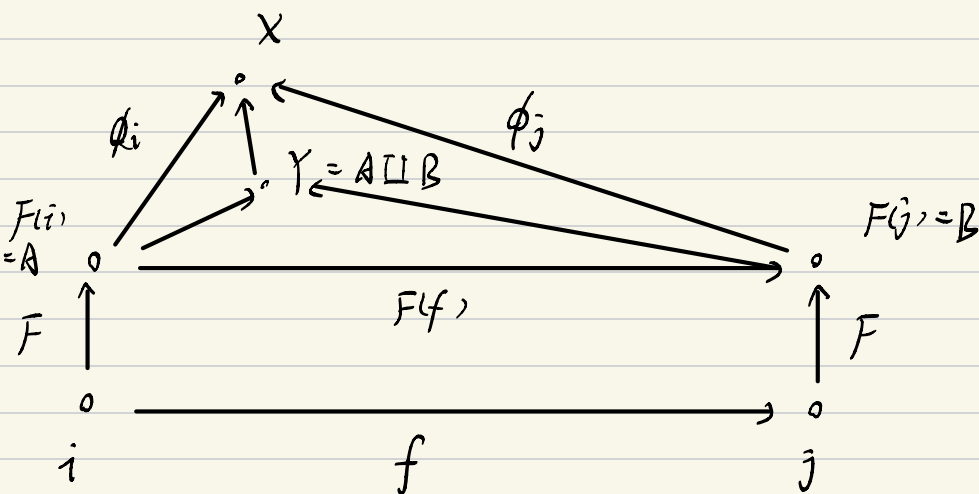




$$A \times B = \lim F$$

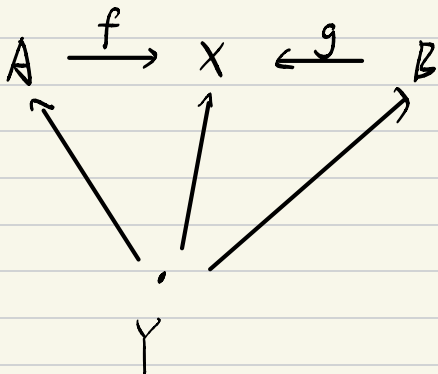
$$F: (A \quad B)$$

余极限

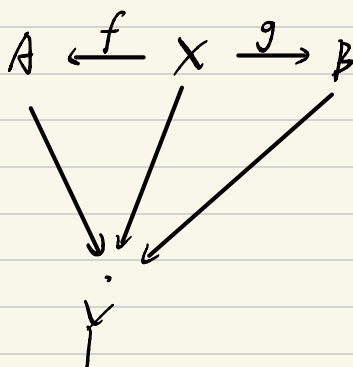


纤维积 (fiber product) 及余 \sim

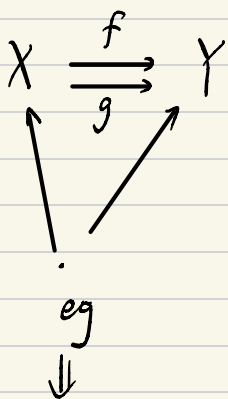
pull back



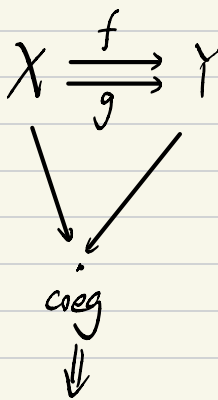
push out



等化子 (equalizer) & 余 \sim



$f \circ e = g \circ e$ 的最大公共集


$$k \circ f = k \circ g \text{ 的最小公共集}$$