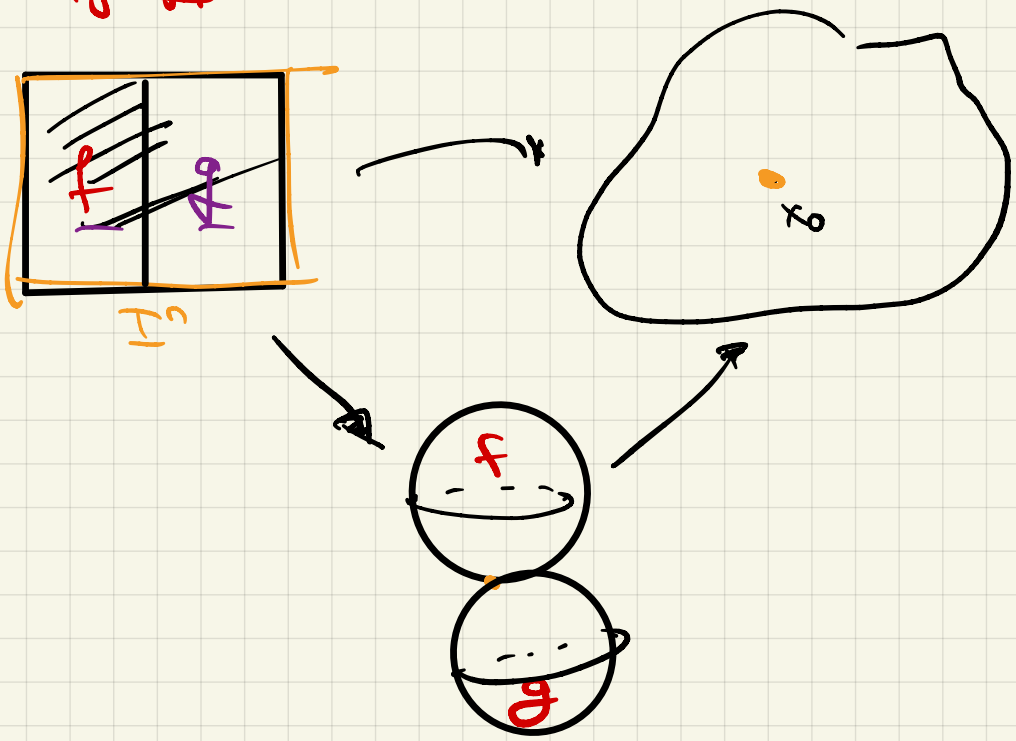
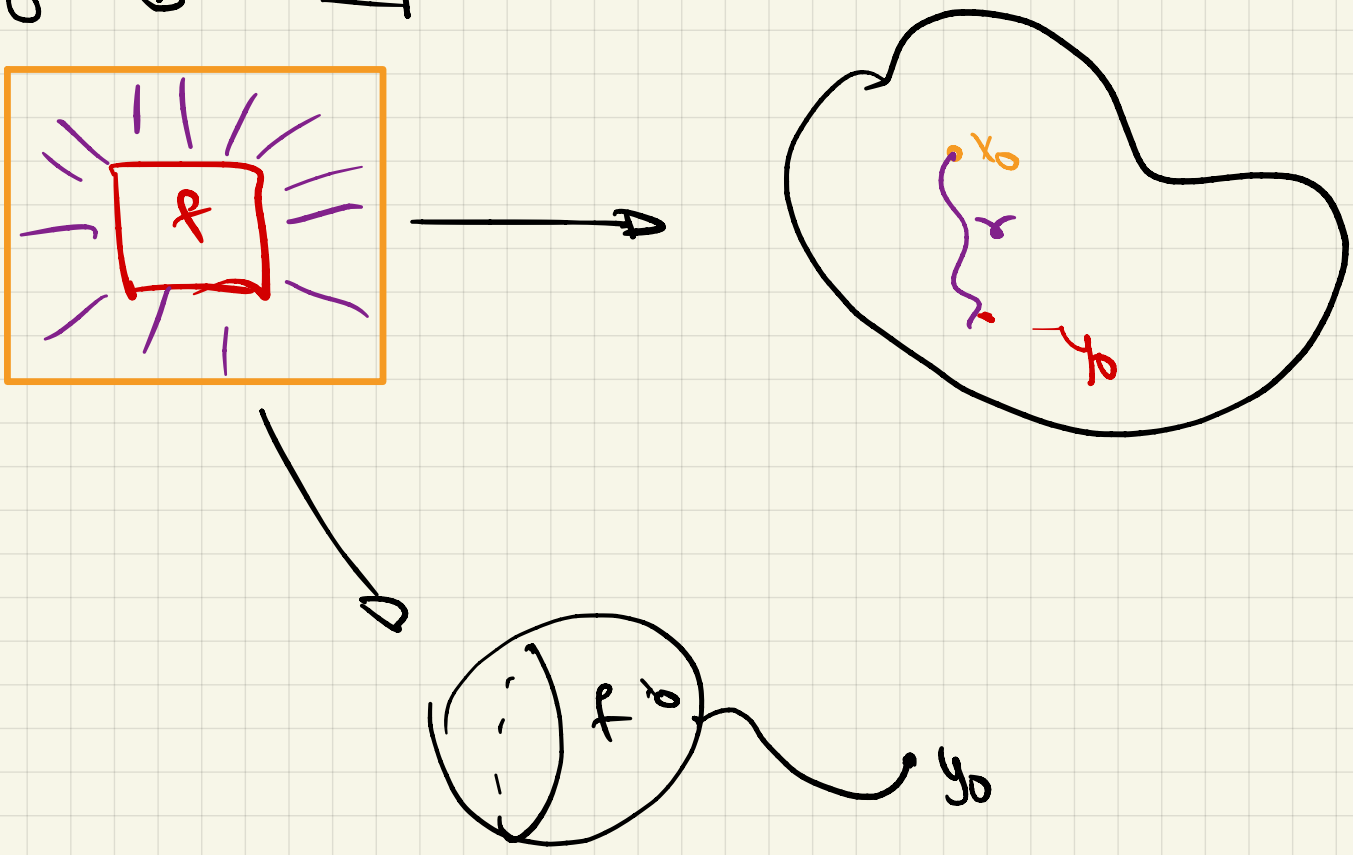
# Higher Htpy grps

map




Change of base pt.




Change of base pt non canonical iso $\pi_n(X,x_0) \cong \pi_n(X,y_0)$

NB! $x_0 = y_0$ shows, $\pi_1(X,x_0) \curvearrowright \pi_n(X,x_0)$ acts on

Note one exercise shows,

Covering map induces $\cong$ on $\pi_n$ for $n \geq 2$!

(injective $n=1$)

So, we know the higher htpy grps of spaces with contractible covers!

Contractible $\Rightarrow$ all htpy grps trivial!.