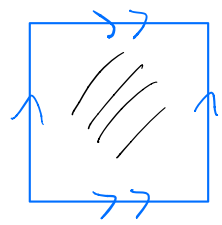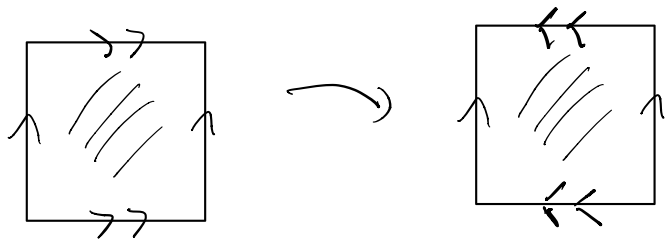$Q_2)$ $(X, X^{(1)})$ = BLUE = "RELATIVE PART"

$f: X \longrightarrow X$ flips one S', identity on The other

We have:

Excision ≅

Commute

$F = (x, y, z) \longmapsto (-x, y, z)$
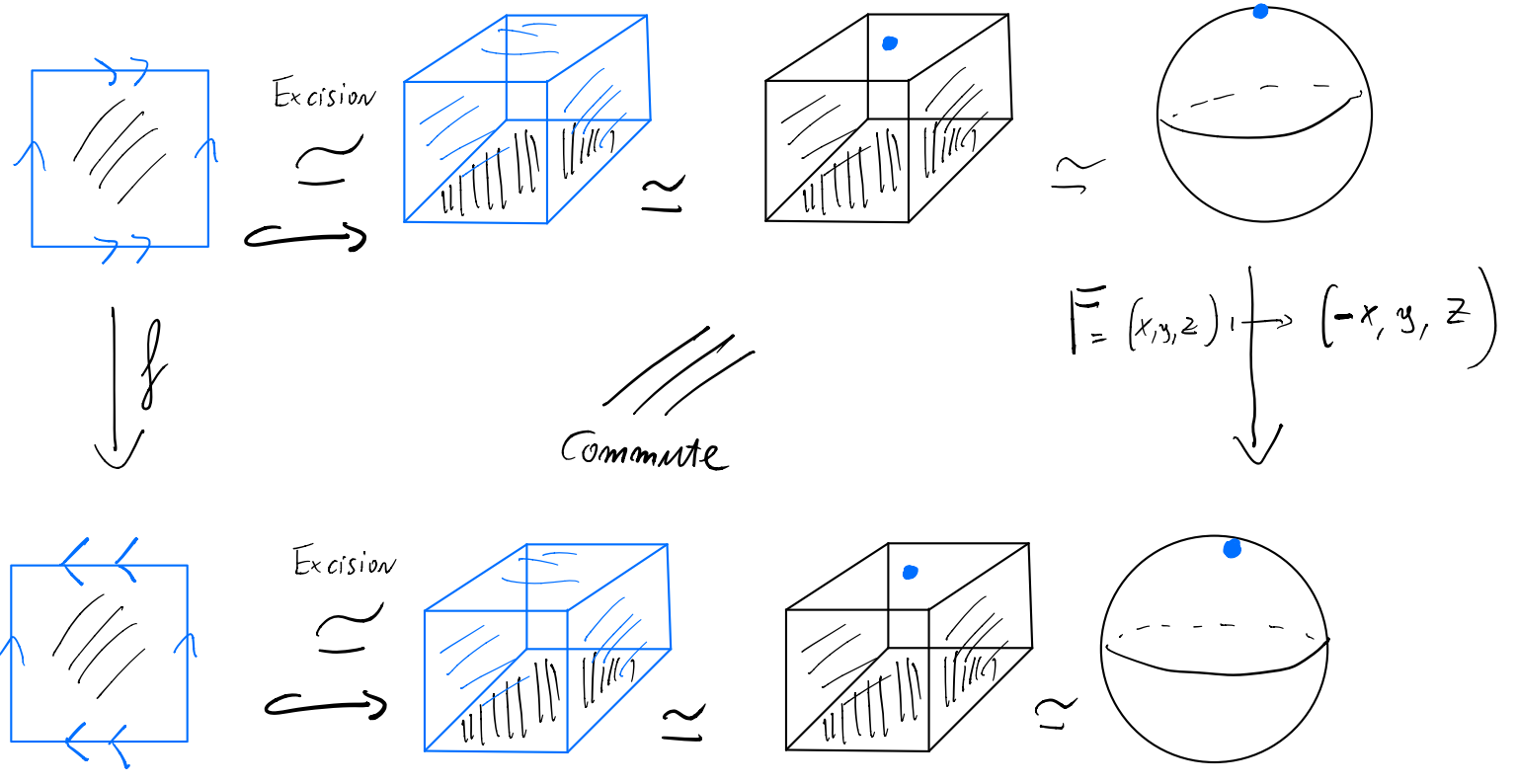
All maps are ≅ in Homology and F is multiplication

By -1 on H_2

$\implies$ $\beta_2 : H_2(x) \longrightarrow H_2(x)$ is multiplication

by -1