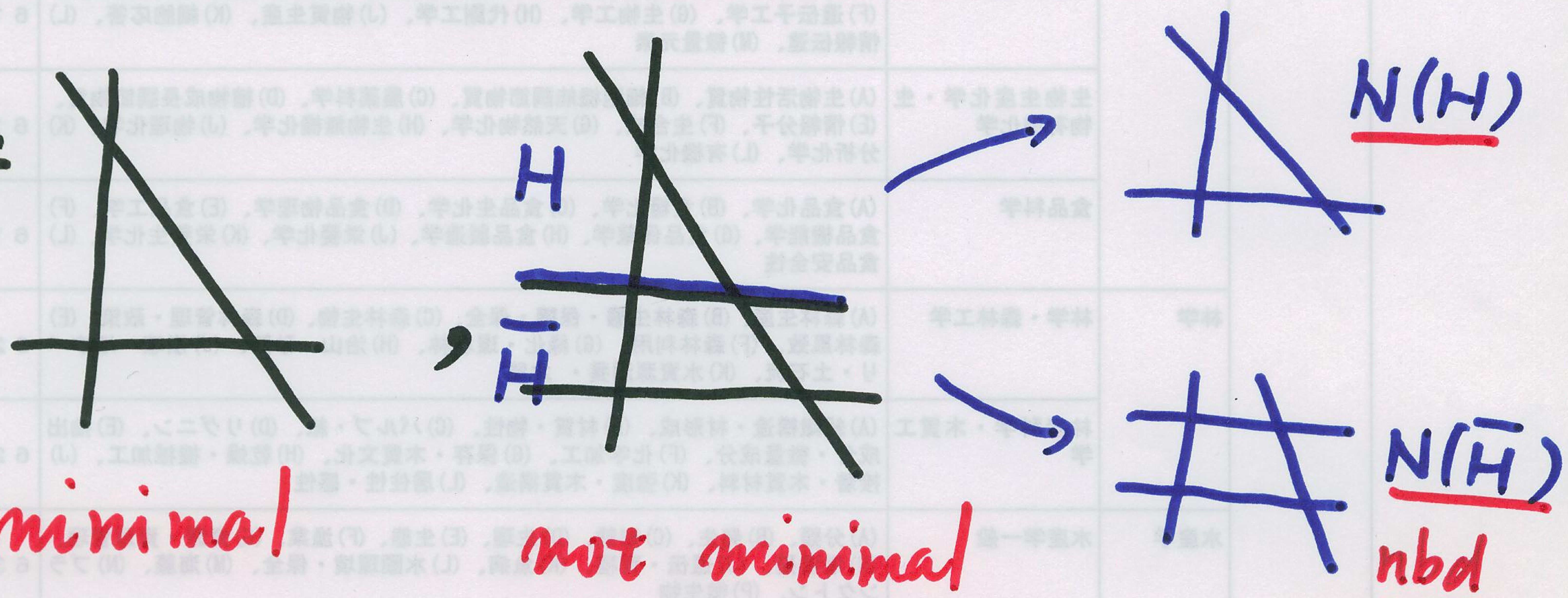
Outline of Proof

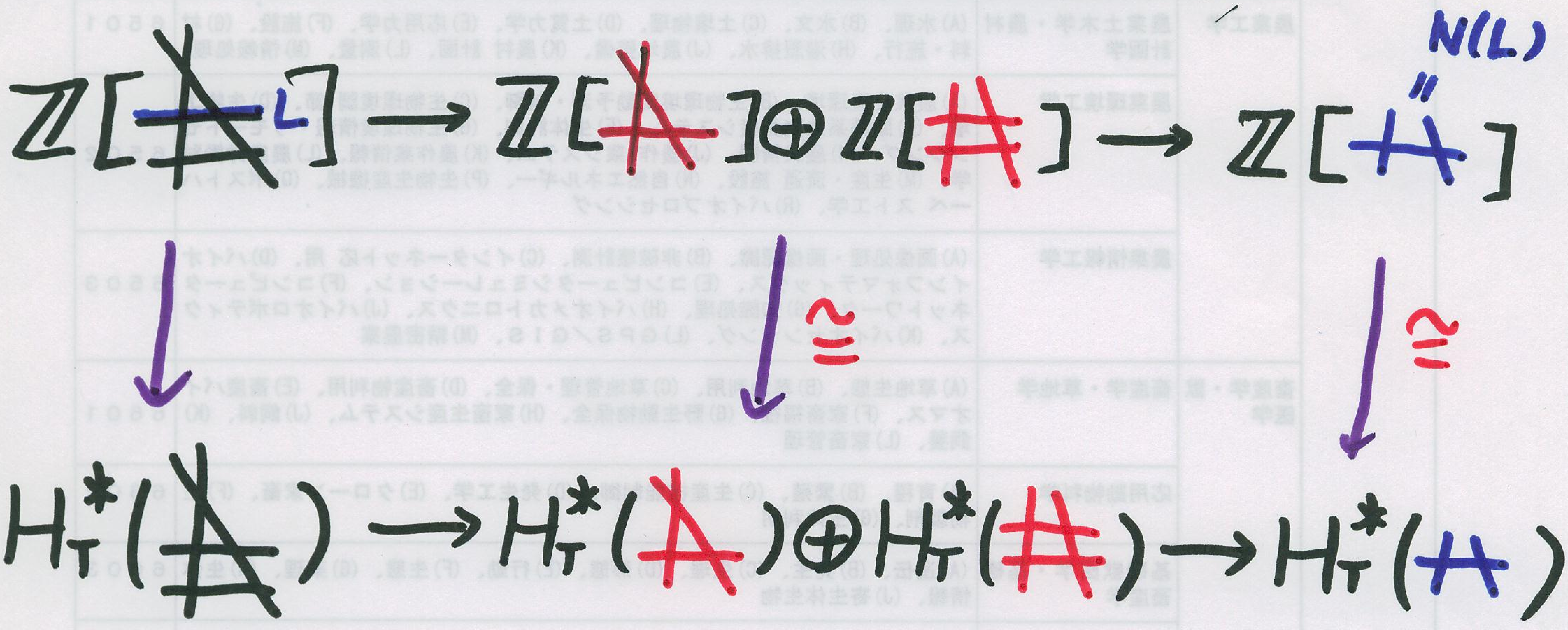
① $T = (\{p\}, E_{\bar{p}})$ ✗ $= \Gamma$

② T is a minimal

E.g.



③ T is not minimal.



(Mayer-Vietoris of hypertorus graph)