Kapovitch's class, Wed Feb 4: Sisto on Agol's Theorem

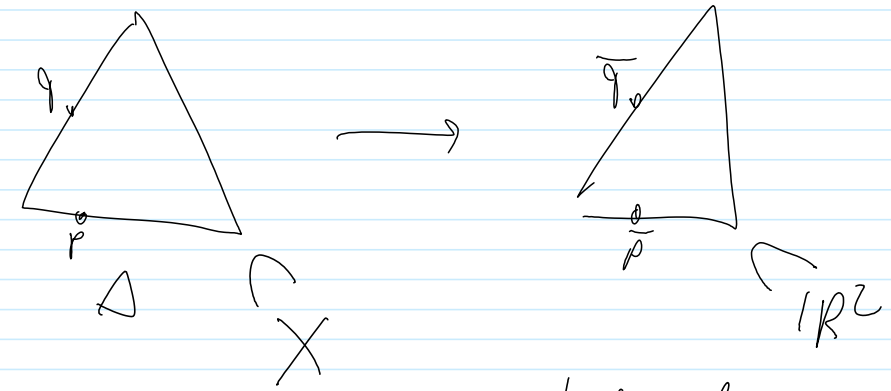
February-04-15 11:07 AM

Def'n A cube complex is CAT(0) if its NPC (non-pos curved) & 1-conn.

Recall goal: M hyp 3-fold $\Rightarrow$ M virtually fibers.

Agol: IF $\pi_1(M) \hookrightarrow$ RAAG then M virt. fibers.

X geodesic metric space is CAT(0) if for every triangle Δ in X, its equi-side-length $\bar{\Delta}$ in $\mathbb{R}^2$,



$d(p,q) \le d(\bar{p},\bar{q})$

"triangles in X are no fatter than Euc. triangles".

Thm X 1-connected complete Riem. mfld is CAT(0) $\Leftrightarrow$ all sectional curvatures ≤ 0.

Exercise: 2. CAT(0) $\Rightarrow$ contractible.

1. CAT(0) $\Rightarrow$ uniquely geodesic.