Q1: Kapovich: (ala outamatrini? Lession Kapovich: (ala outamatrini? is there a notion of "Velative Qutomaticity"? Data: Hite G group + subgroup Or finite Uhat does it mean for pair (G, H) or (G, H, ,-, H, ) to be Or finite Cellector, relatively automatri? The Candition: pour shall be coset actomatic: Schrev graph of (6,H) shall be actomatic. Alla) Hermiller's Panreylwitty of geo desizes (Change generative Eet Willout danging behavior) Give one Vexample?. all): (neak form) "Pan regularity of admitting a regular set of geodest Normal forms". I.e. for every finite generative set, there is some set of geodesis which define a regular language. Q3: Is there a finitely presented group with decidable (Hemilter) problem but does not admit an auto-stackable structure. QY (Kapovich); Higher rank irreducible lattices admit auto-stackable structures? Nove? Some? Co Compact / non-uniform!. Eglet G be relatively hyperdola with peripheral subgroups being Untrally nilpotent (eg rank 1 non-initorn (attres). Does Gadmit av auto-stackable structure? Q5 (4) ka): = = 11 freeverble higher ranke (attro that is

- non-free? Compitationally impractical to produce buy words in generators (our infinite freeds - a few multiplications & out of memory).
- · Find idea to justify non-fileness without explicit matrix multiply cation.