

# Free Set on Weird (or Super) Geometry: Maps to Taxonomizations & Asymmetry Cravings

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Joke: Oh! No gosh-awful (naked diva vodka) shots as no one here expects! :)

Millennium Hilton New York, NY

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**Universe's utopic reality! ~ our core value, impalpable, asymmetrical monsters stacking! Free! Be monarchs over hermeneutics, alchemists, man-made mind-warps & World Government! By conquest or consent :-)**



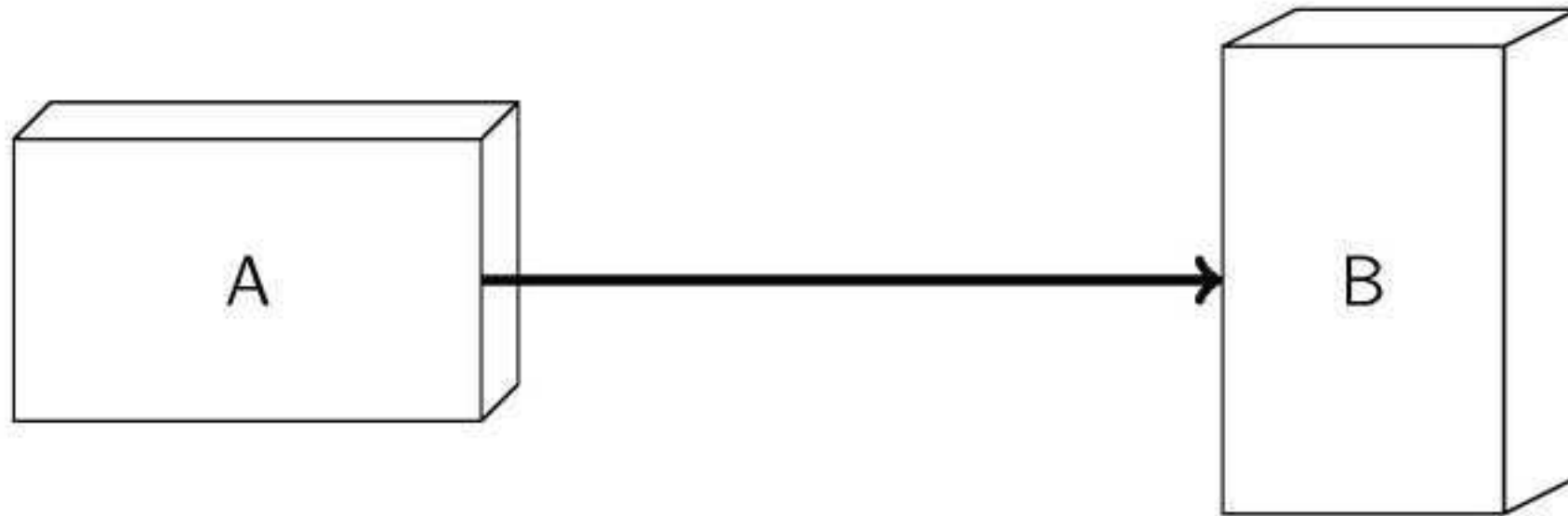




**The Philosophy of this stuff,  
almost surely, leaves any open stuff open!**



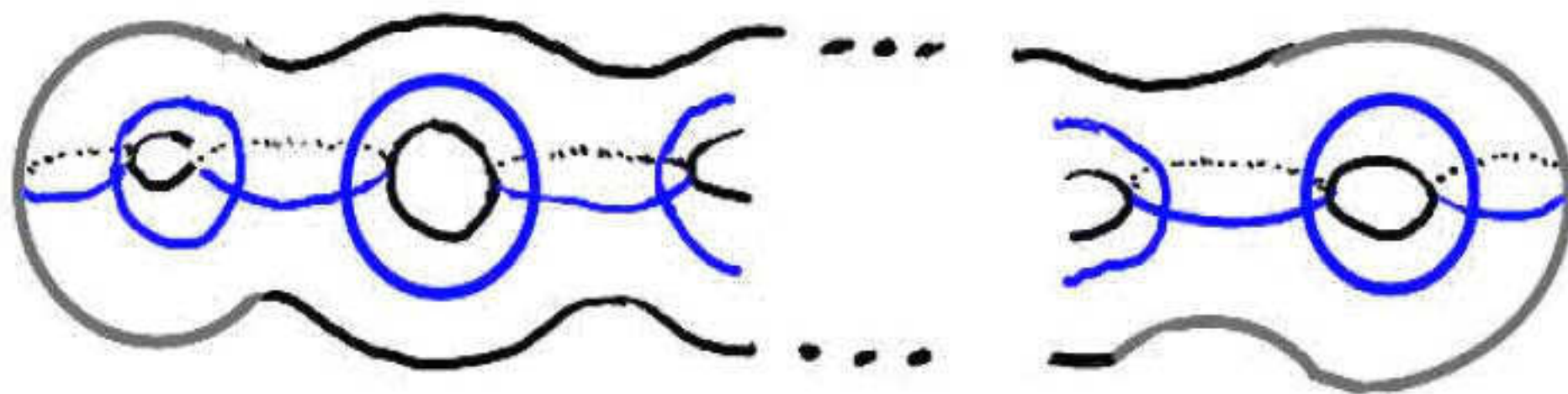




**Ah, but wait! Not so fast! This manipulation, I think is wrong! We are only looking for an open set within the set of geometric blah blah!**

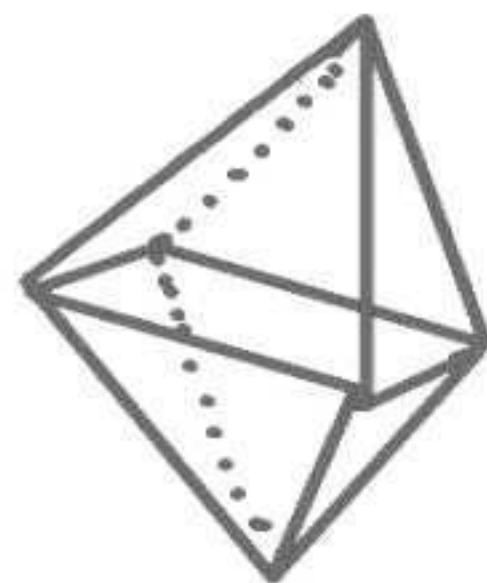
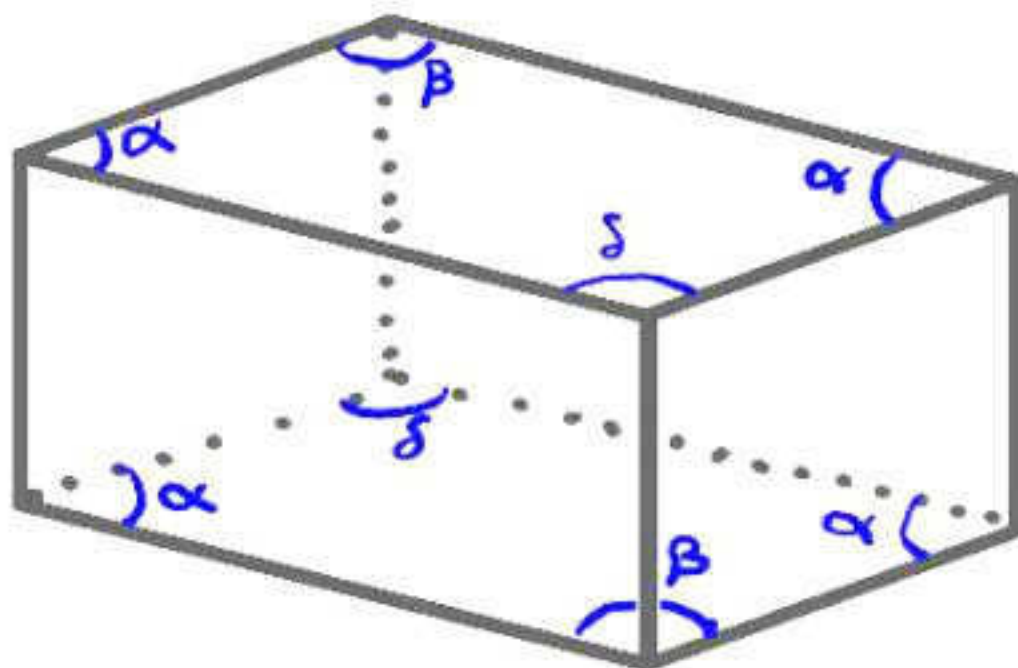
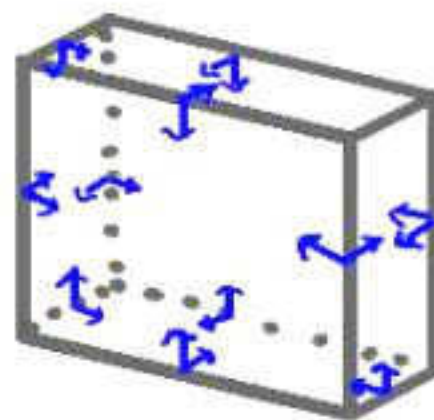
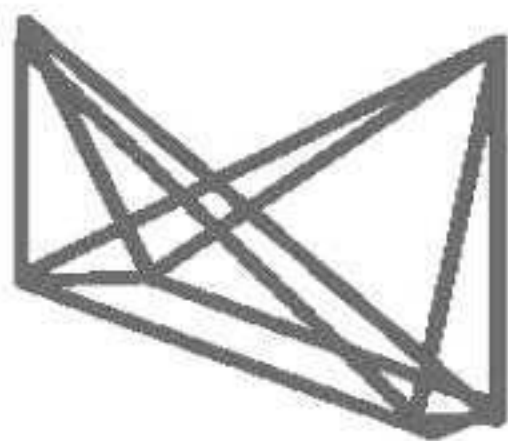
**(And, any geometric blah blah has to satisfy the above relations, so nothing is lost!)**

Okidoki now, in finding a geometric blah blah for the genus of polyhedron w/  $6g-6$  degree of freedom and as much freedom as possible, we anticipate a relation for each “lens”



i.e.,  $6g-5$  relations, leaving one degree off & maybe, terribly: Another one degree for fitting things up in the end; that would mean that they are indeed generally rigid in their “edge- $O(n)$ -tus” ♥





**O.K.: Finish the combinatorial stuff & start scripting while working other geometric stuff? (Hmm, not yet!)**



## When we change one arrow

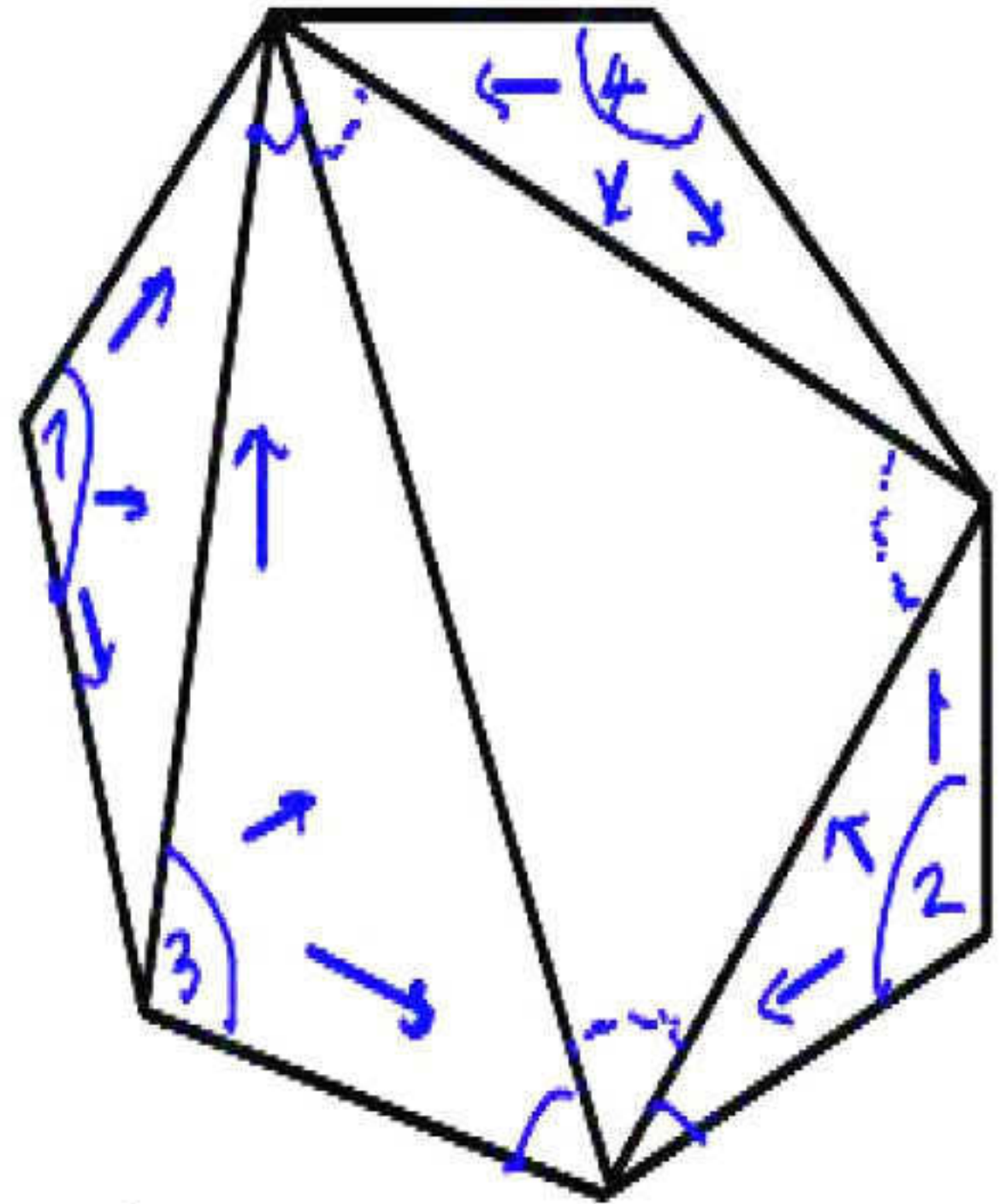
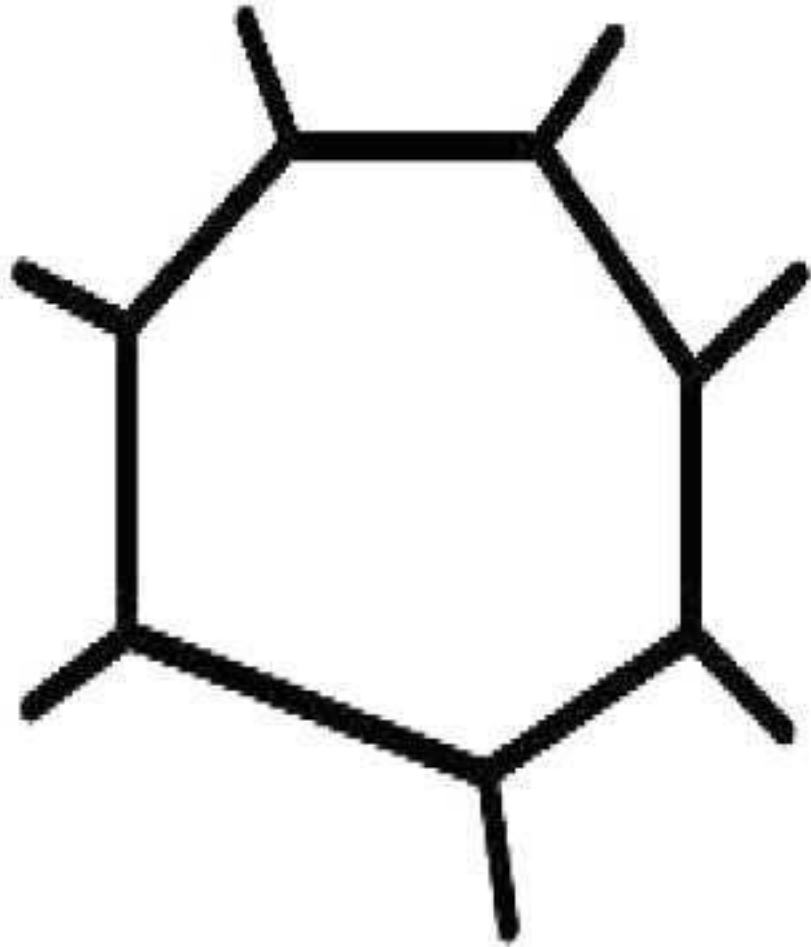


Suppose on LHS, every face had 3 outward pointers; then, on RHS, every face has 2 to 1 obstruction, and face 2 suddenly has 4 to  $\Lambda$  degree of freedom. So, hey presto! Solved #2!

**Now claim: Every genus  $g$  trivalent closed connected graph has  $6g-6$  free edges. Then,  $V - E + F = 2g - 2$**

$$\begin{aligned} \text{The other way around, } 2V = 3E &\rightarrow V = \frac{3}{2}E \\ \rightarrow \frac{3}{2}E - E + F &= \frac{1}{2}E + F = 2g - 2 \end{aligned}$$

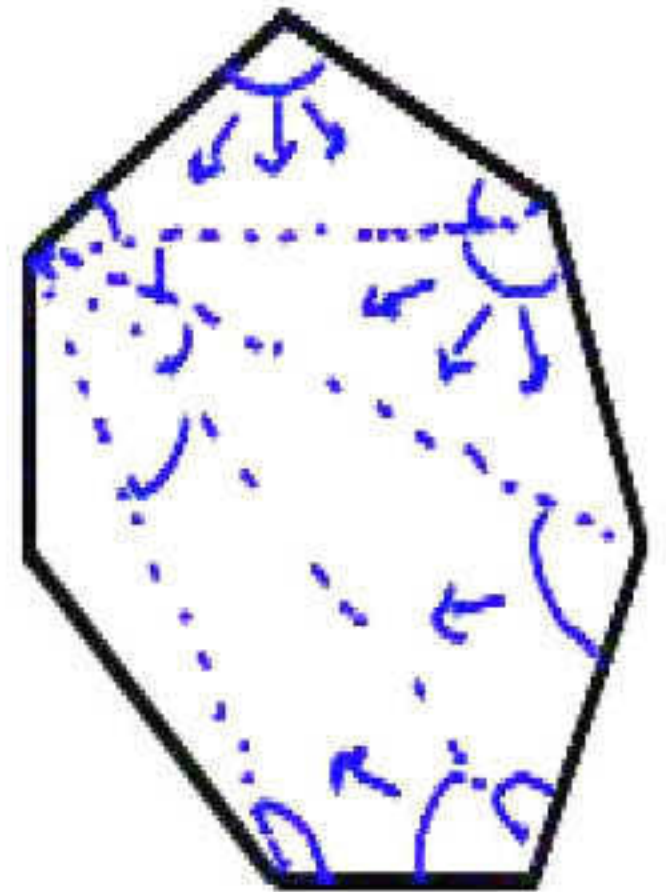
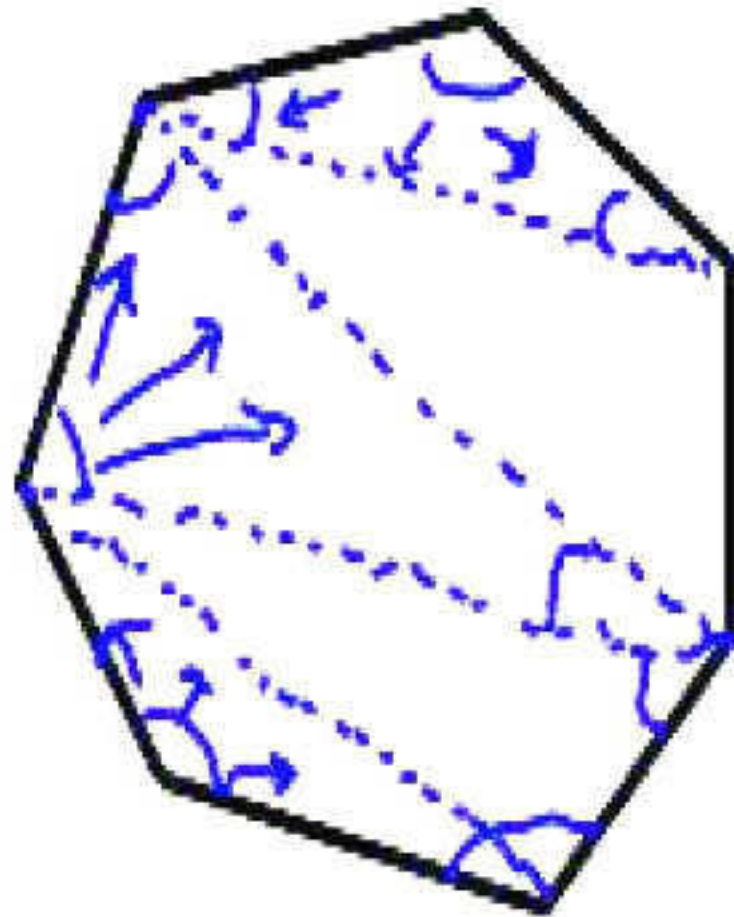
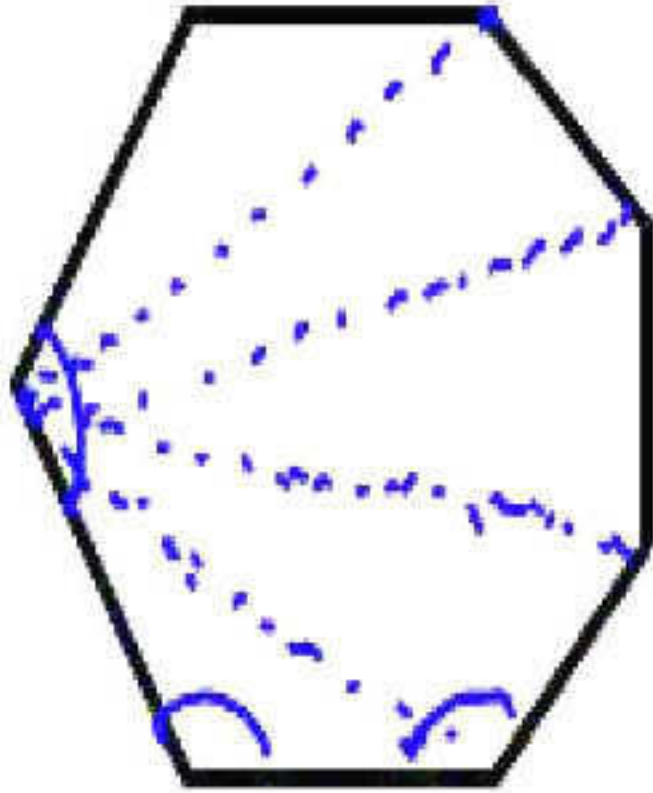




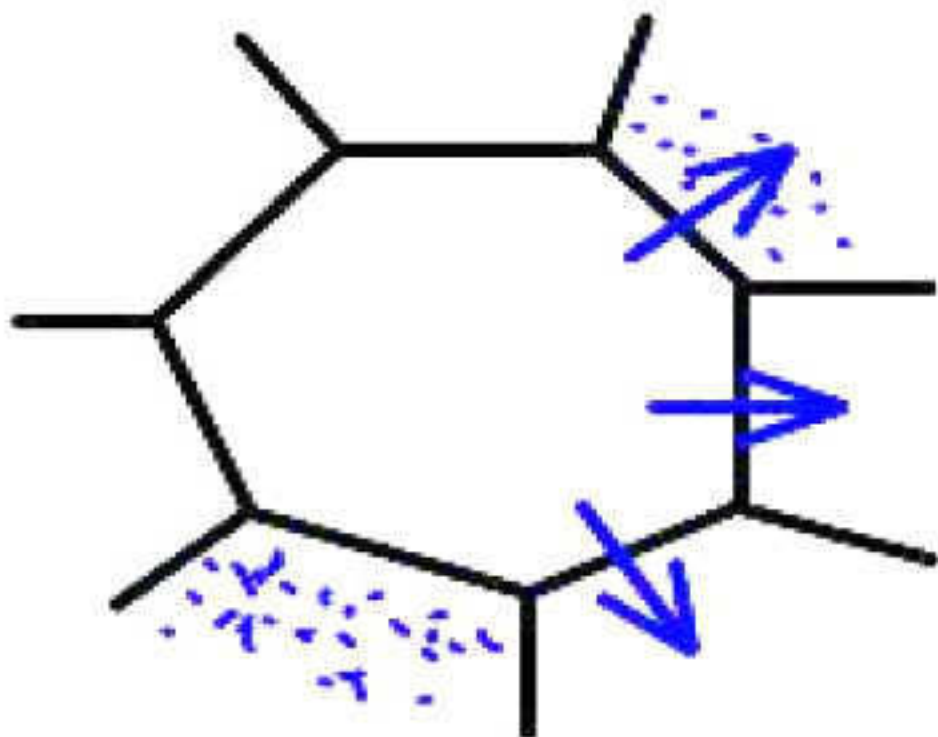
O.K., now that changes a lot (& makes our life easier)



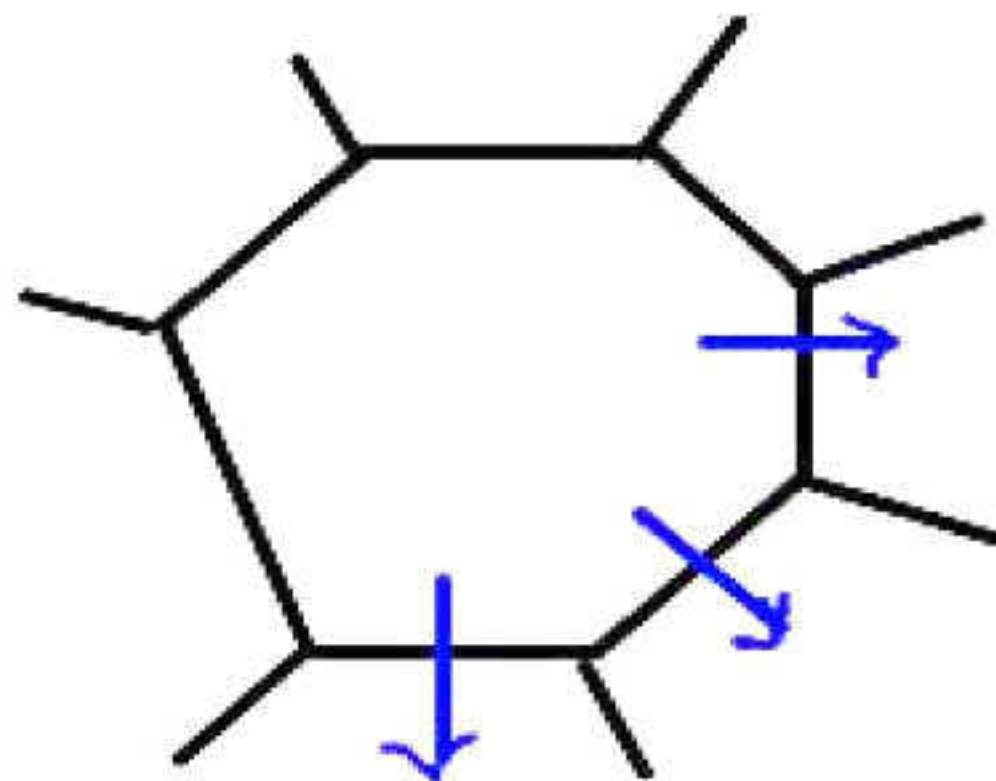
Actually, we  
might want to review this whole coloring business:







vs



affects (a priori) 2 faces, or is there some

(other reason why the deg is indep of coloring?)

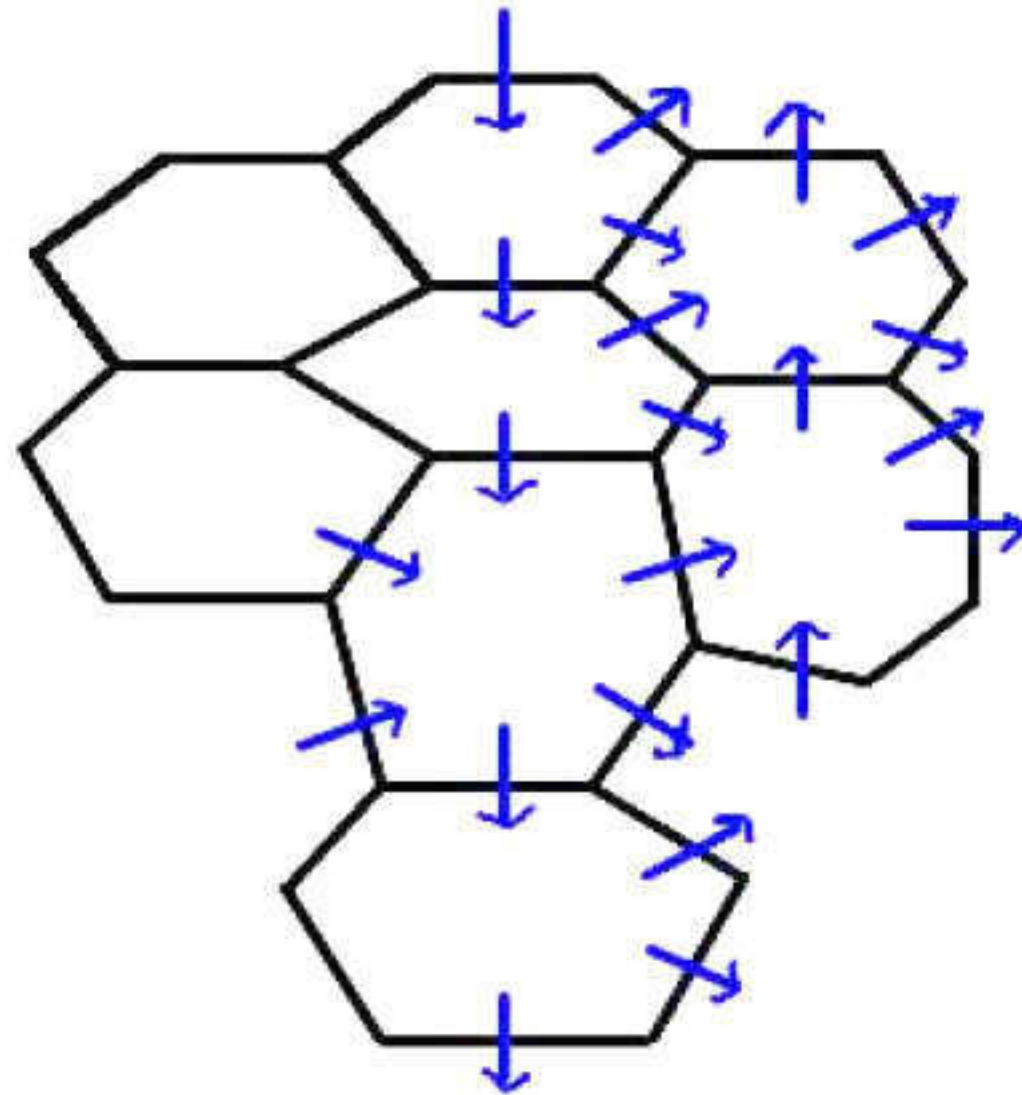
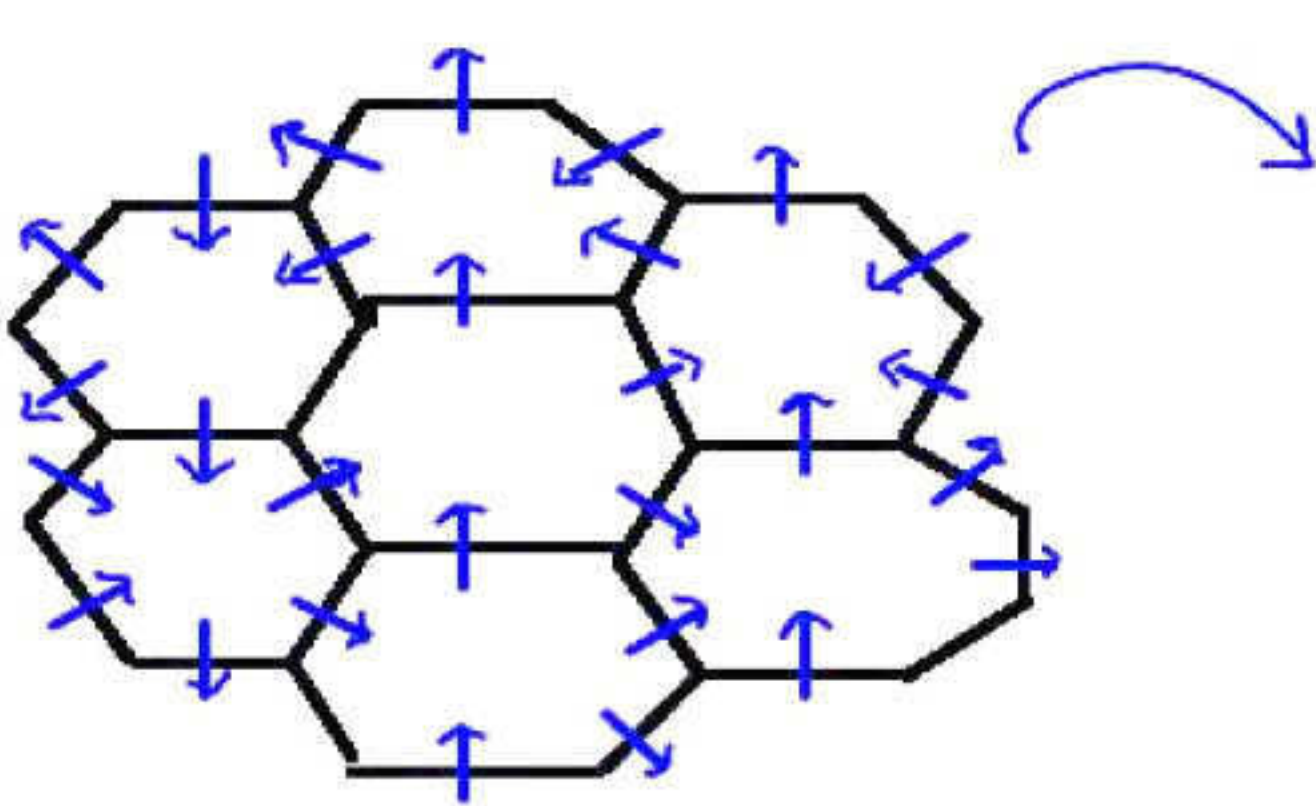
o.k., suppose not, suppose 2 coloring with  $\neq$  degree



**Then,**

- #1    Relate two colorings? (E.g., by rotating faces?  
      & sliding freedom & obstruction)**
- #2    The degree of freedom is well defined**





Not so complicated. ♡

**Any two edges are connected by an outward path,  
because any edge is outward pointing to some face.**  
(Missing an arrow somewhere?) ♡

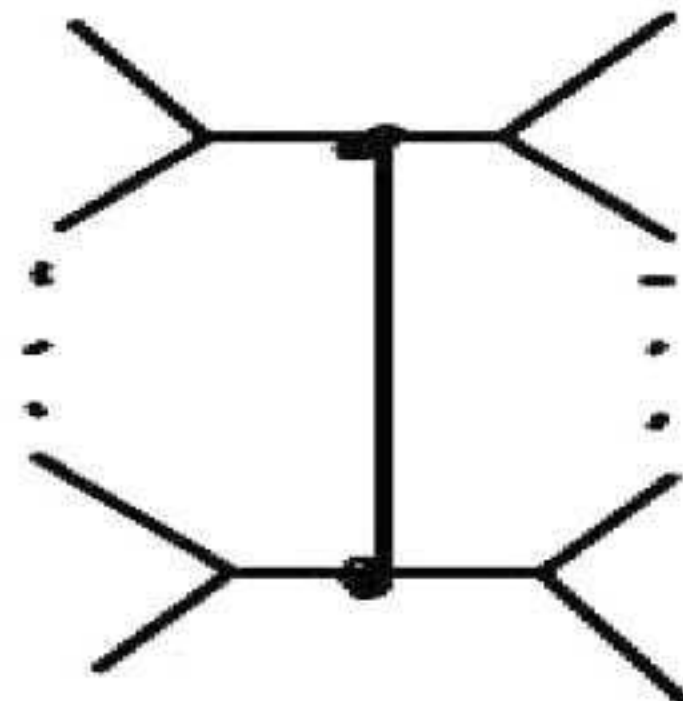
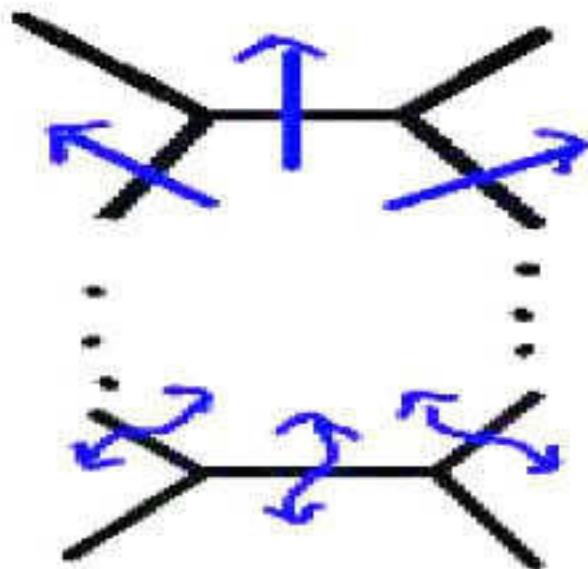


A general thing to “queue” us to eliminate lots of  
Cases: Given trivalent graph, can we rotate or recolor?

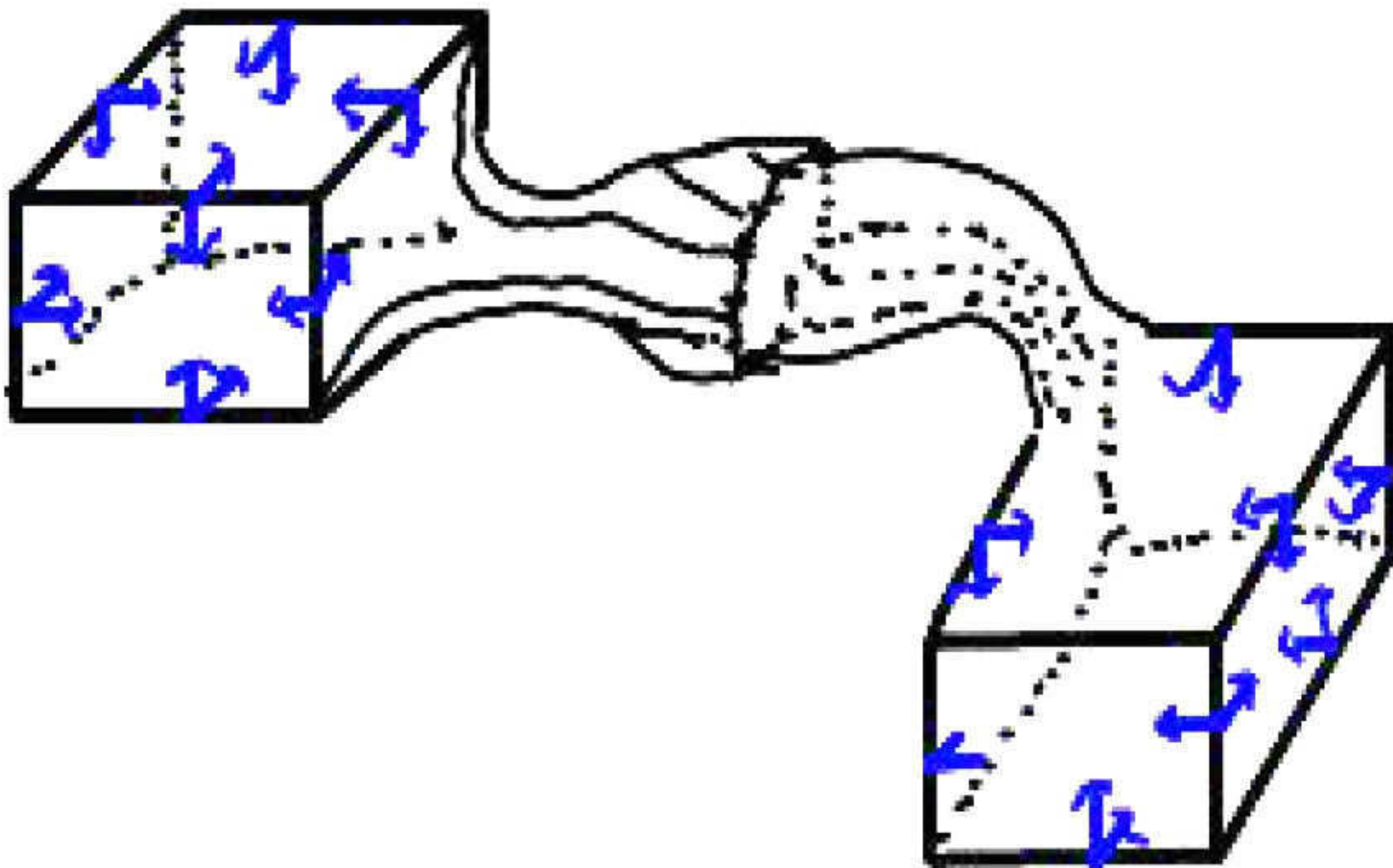
Case 1

[diagram, not imperative]

Case 2, more interesting:







Could have anticipated 6-1 here!

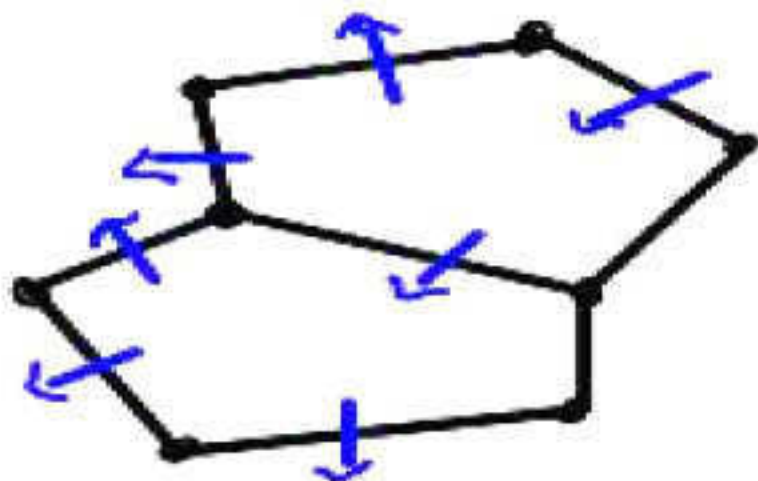
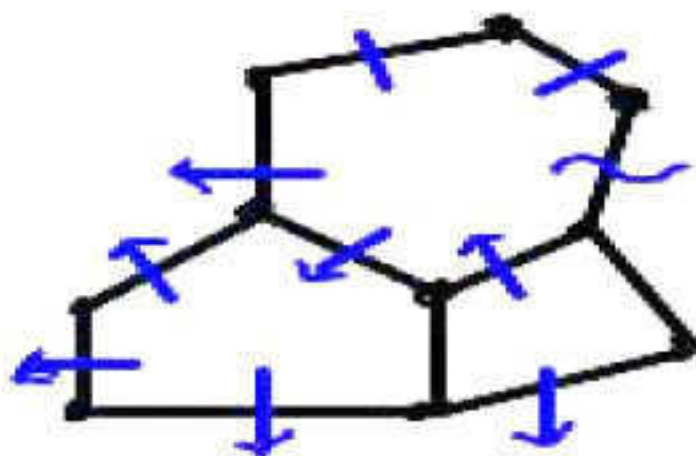
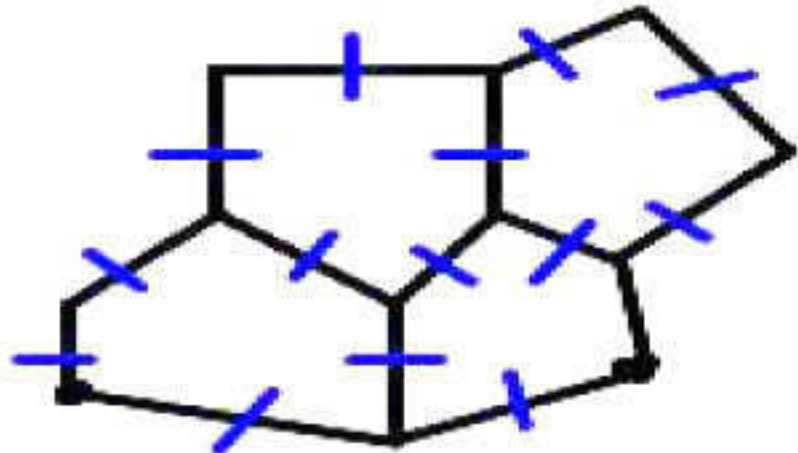


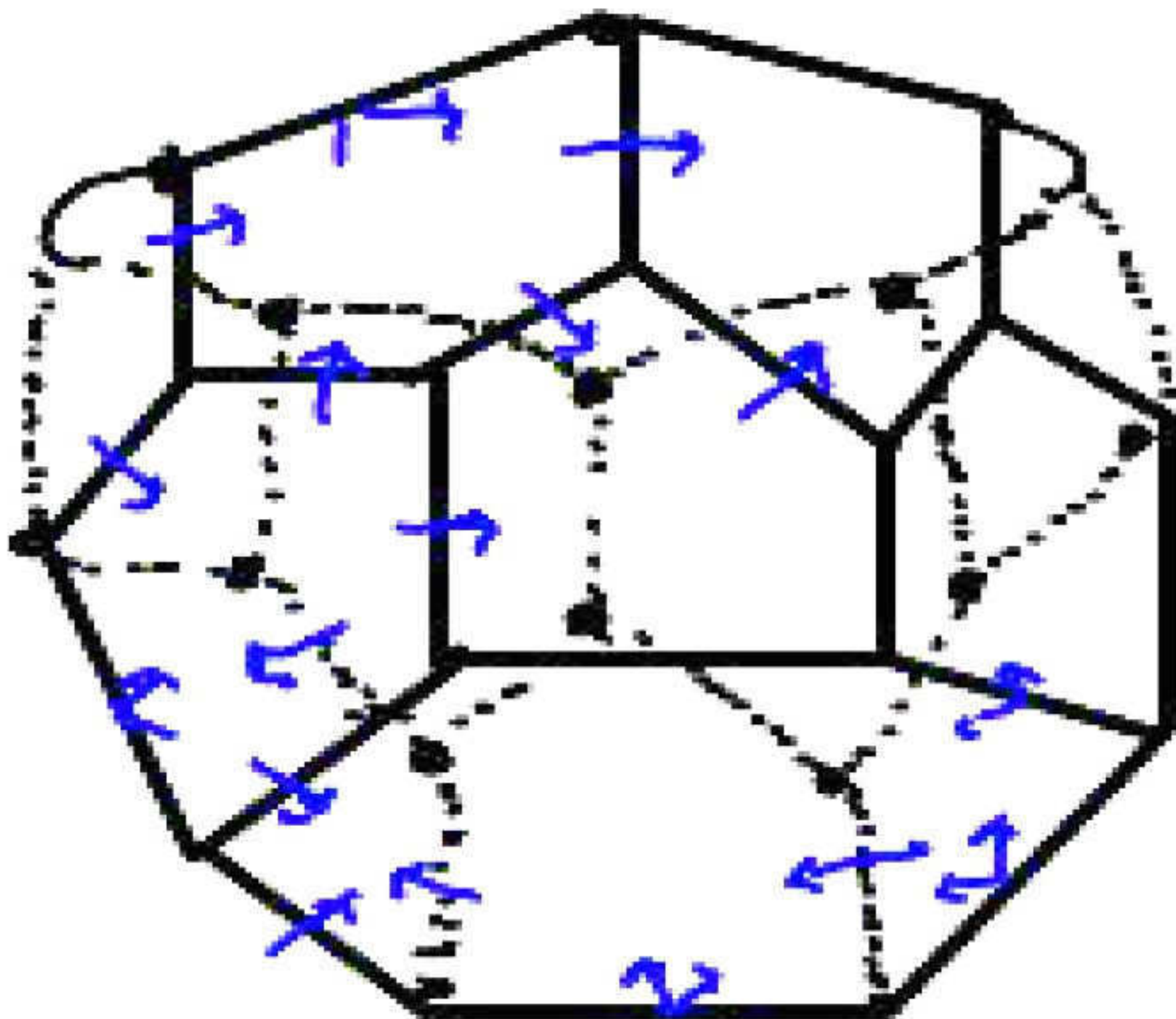
## Kind of Uniformization:

**i.e., we aim to show that our hexagonal kit is optimal**

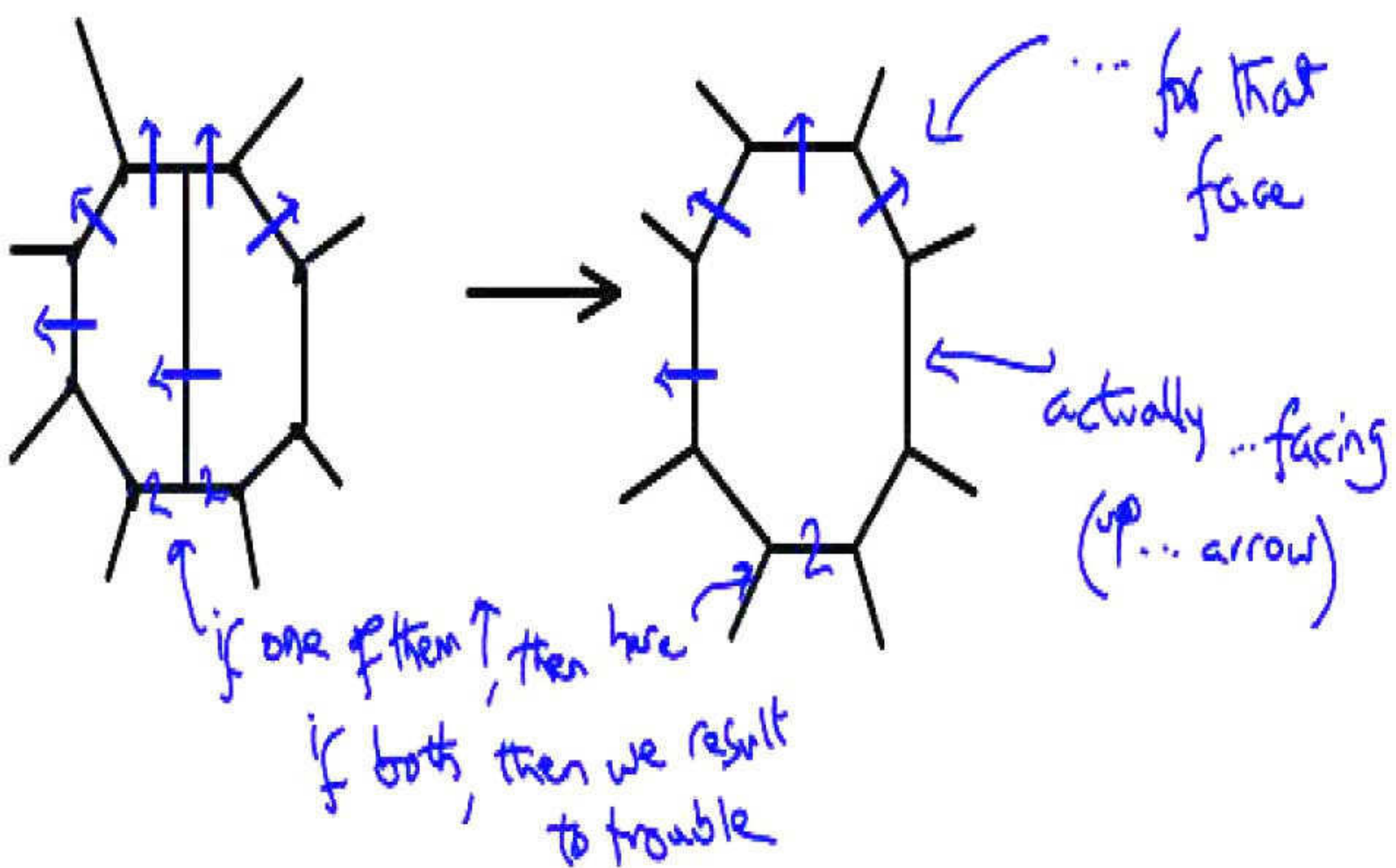
**Plus: Considering two  $n$ -gons with drilled-pentagon  
hut, the two  $n$ -gons each passes out 3 arrows which  
flow on to conflicts, i.e., 6 conflicting arrows  
in total (as usual)**

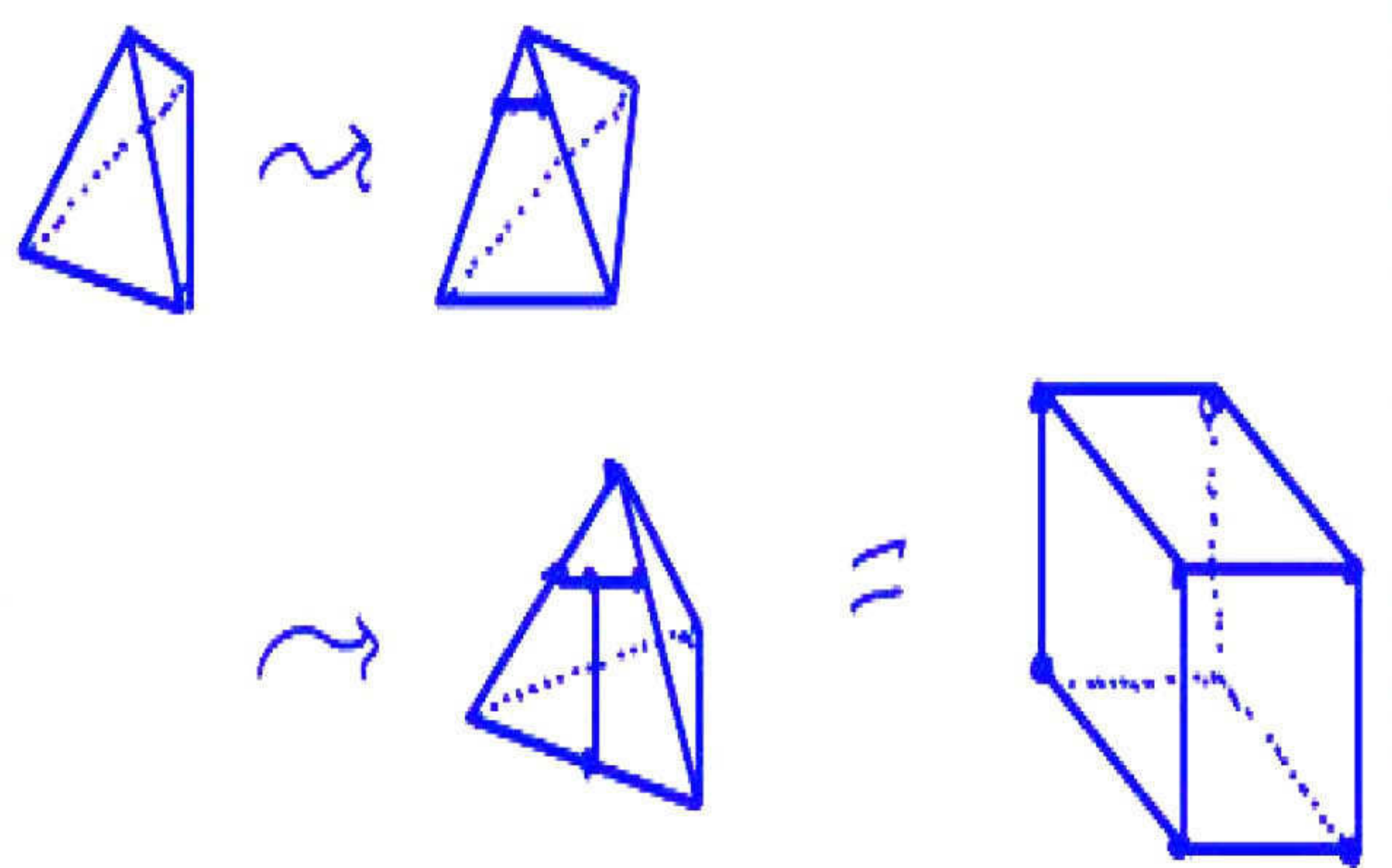




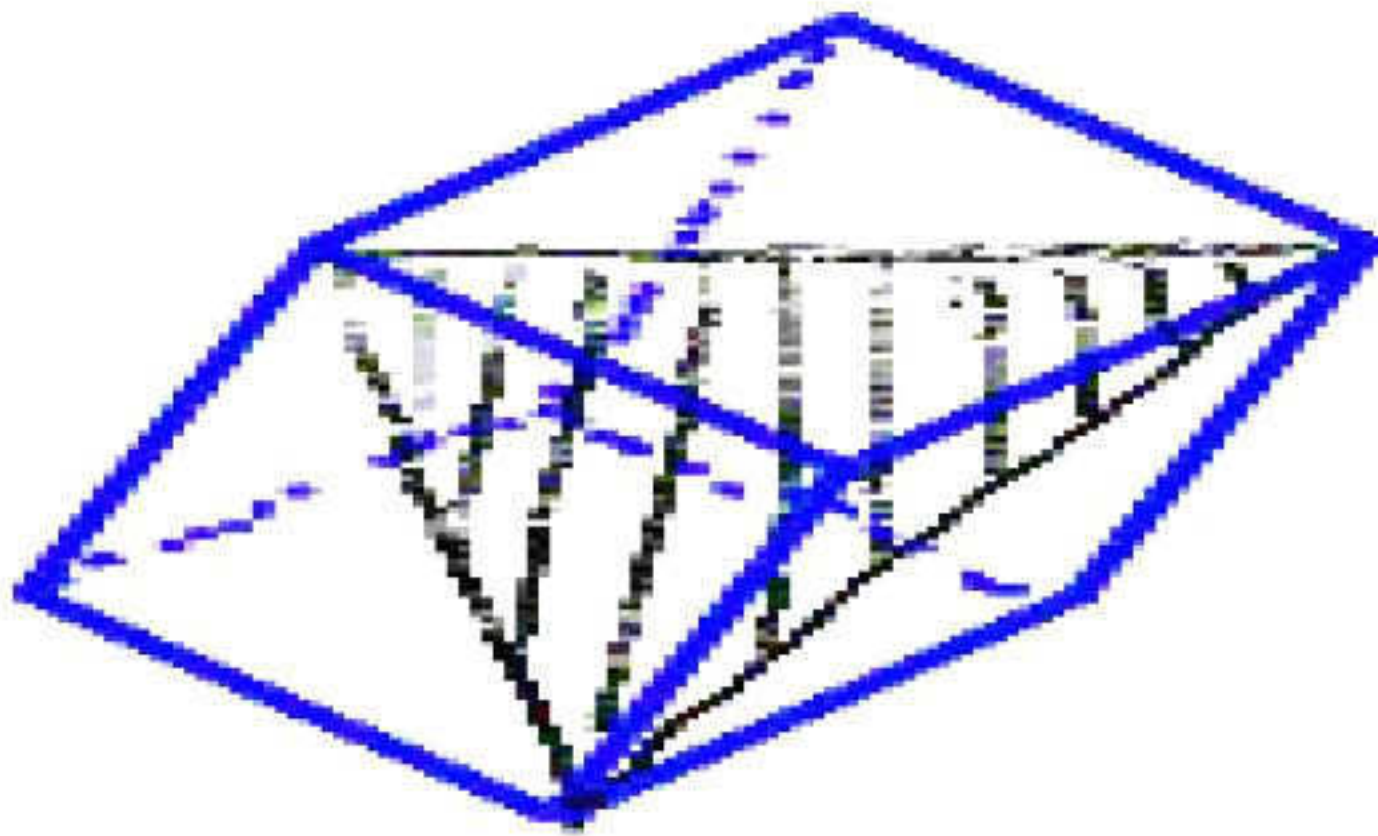










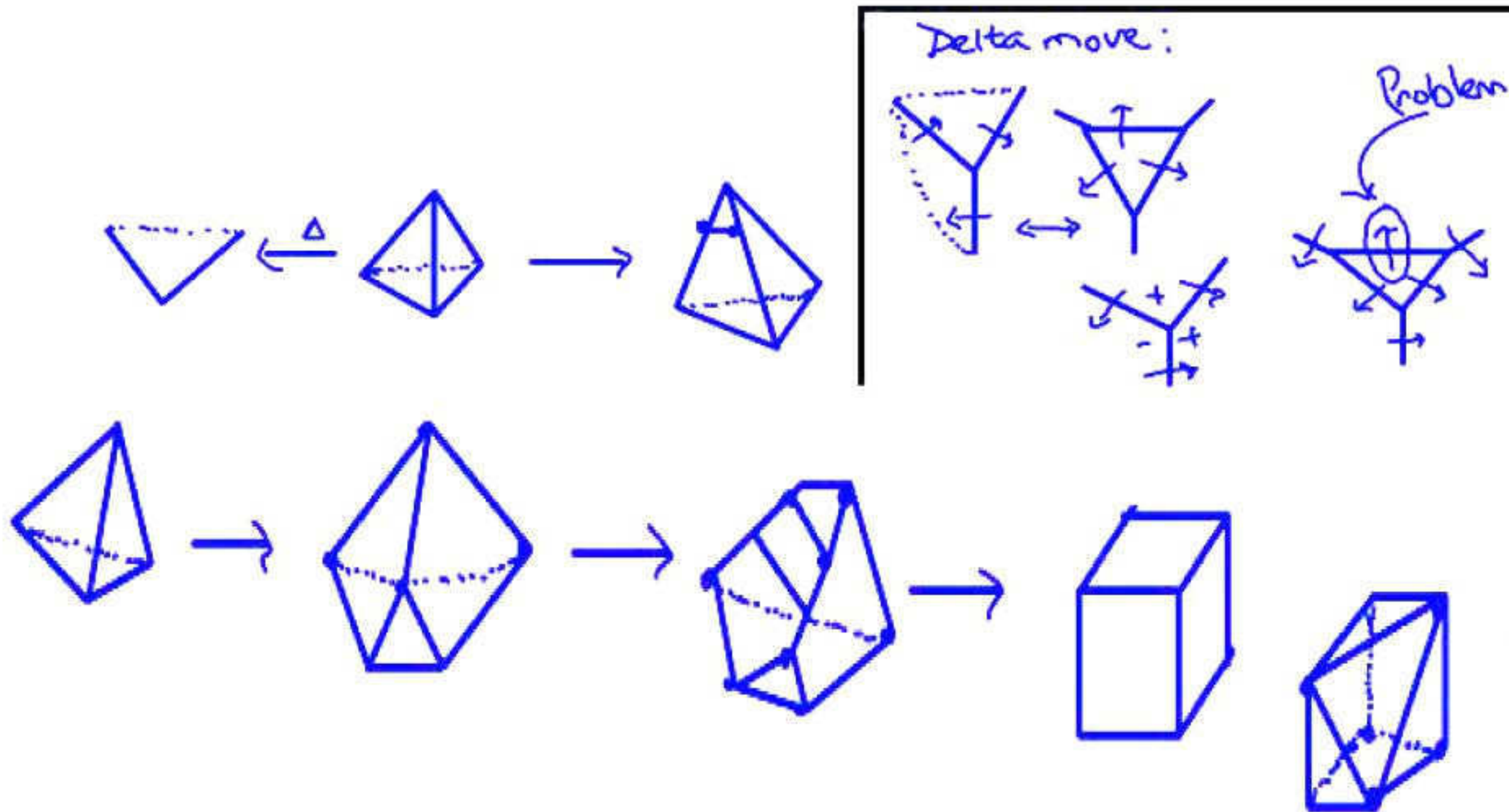


4  $\sim$  Delta moves  $\rightarrow$  pyramid  
+ another = triangle

- Actually, we don't really want! B/c we don't like triangles, but we wouldn't mind.
- We ain't got any to make disappear, and making some is only making things worse.

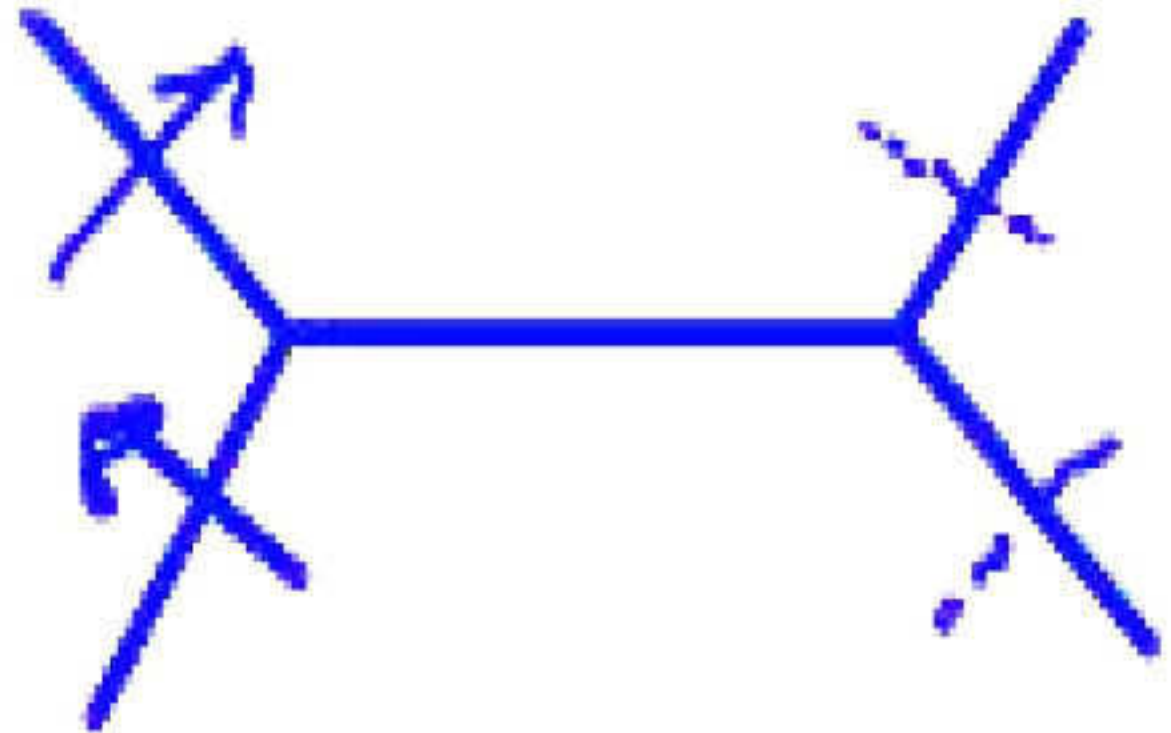
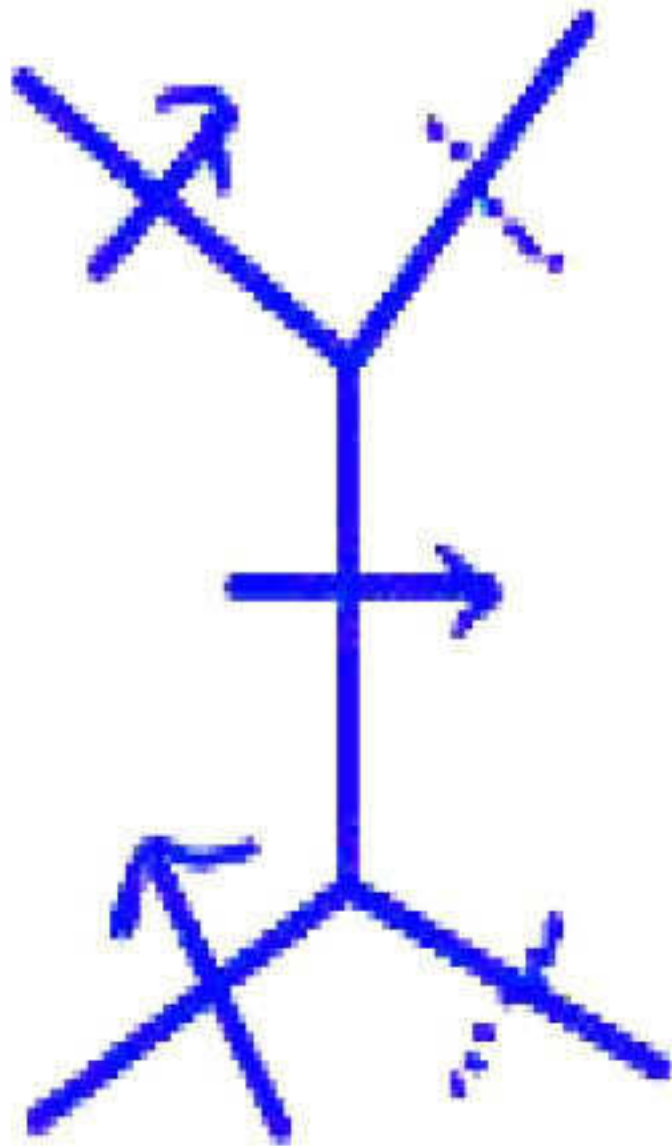


# Can we get by with 2 or 3 only? (I think we can)





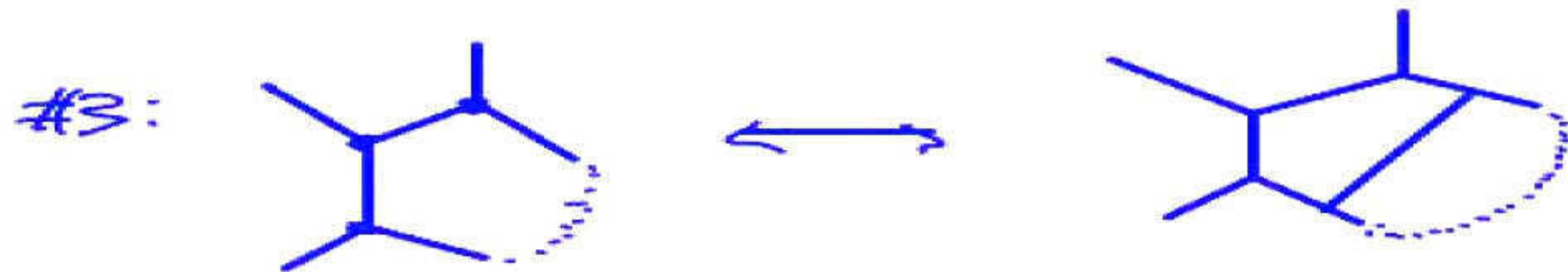
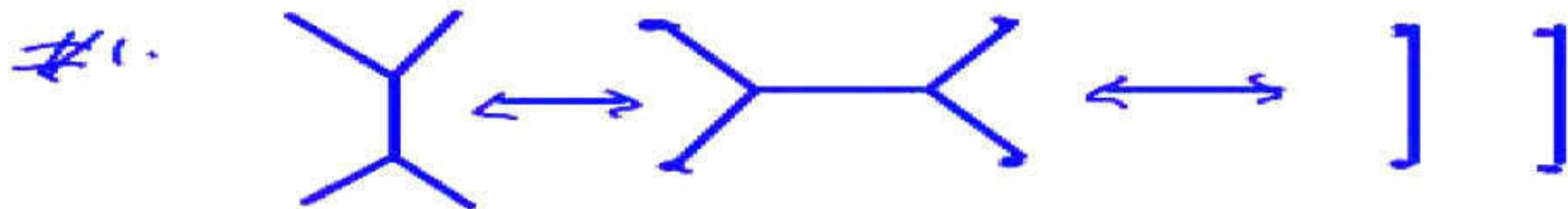
# Then adjust the making of faces



Loosing an outward guy on one face, winning one on another



Genus  $g$  surface decomposition can be joined by action  
e.g., a (finite) sequence of the following local moves:



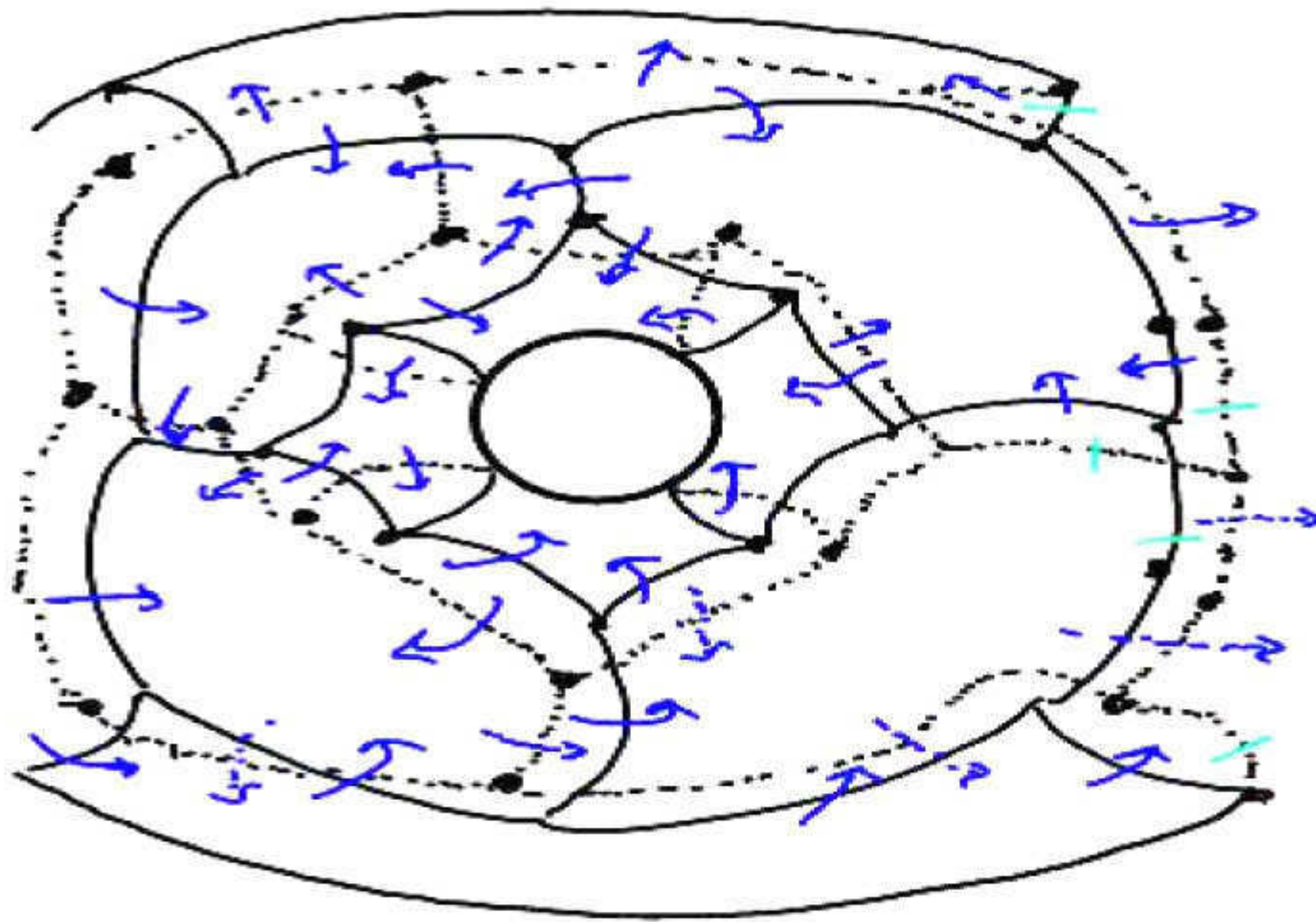


Conjecture: A trivalent genus  $g$  of diagram has  $6g-6$  degrees of combinatorial freedom.

NB:

- ★ Subdividing faces (at the extreme into all triangles) we can easily get much less freedom.
- ★ Subdividing: 2 triangles correspond to making it all pyramids.
- ★ Trivalency corresponds to triangulated polyhedron. It makes sure that this is the most flexible possible b/c the faces are “broken.”

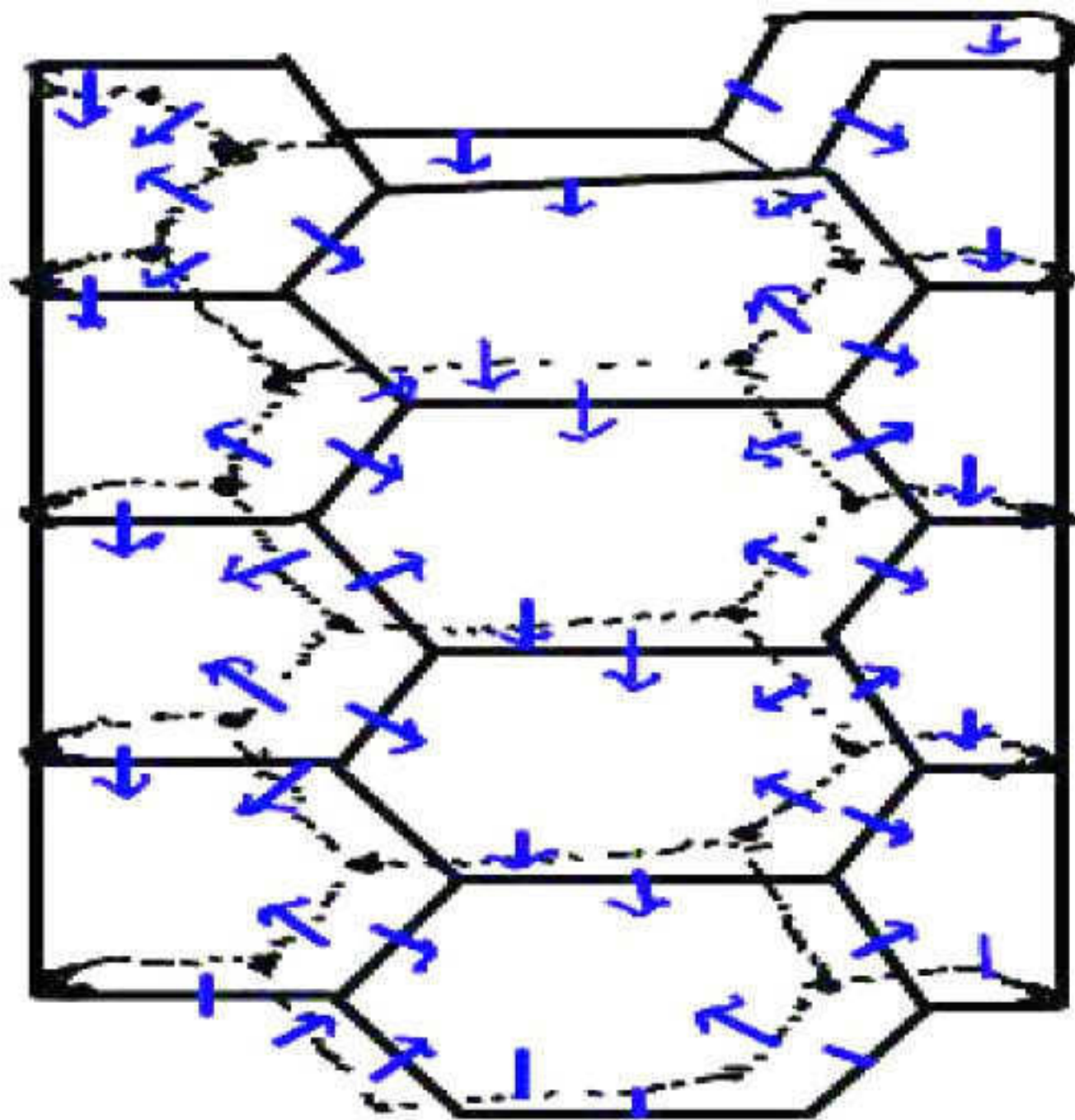




+ 6



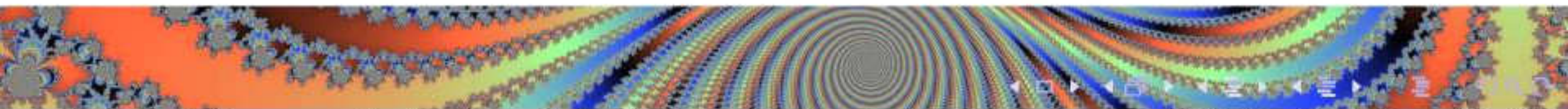
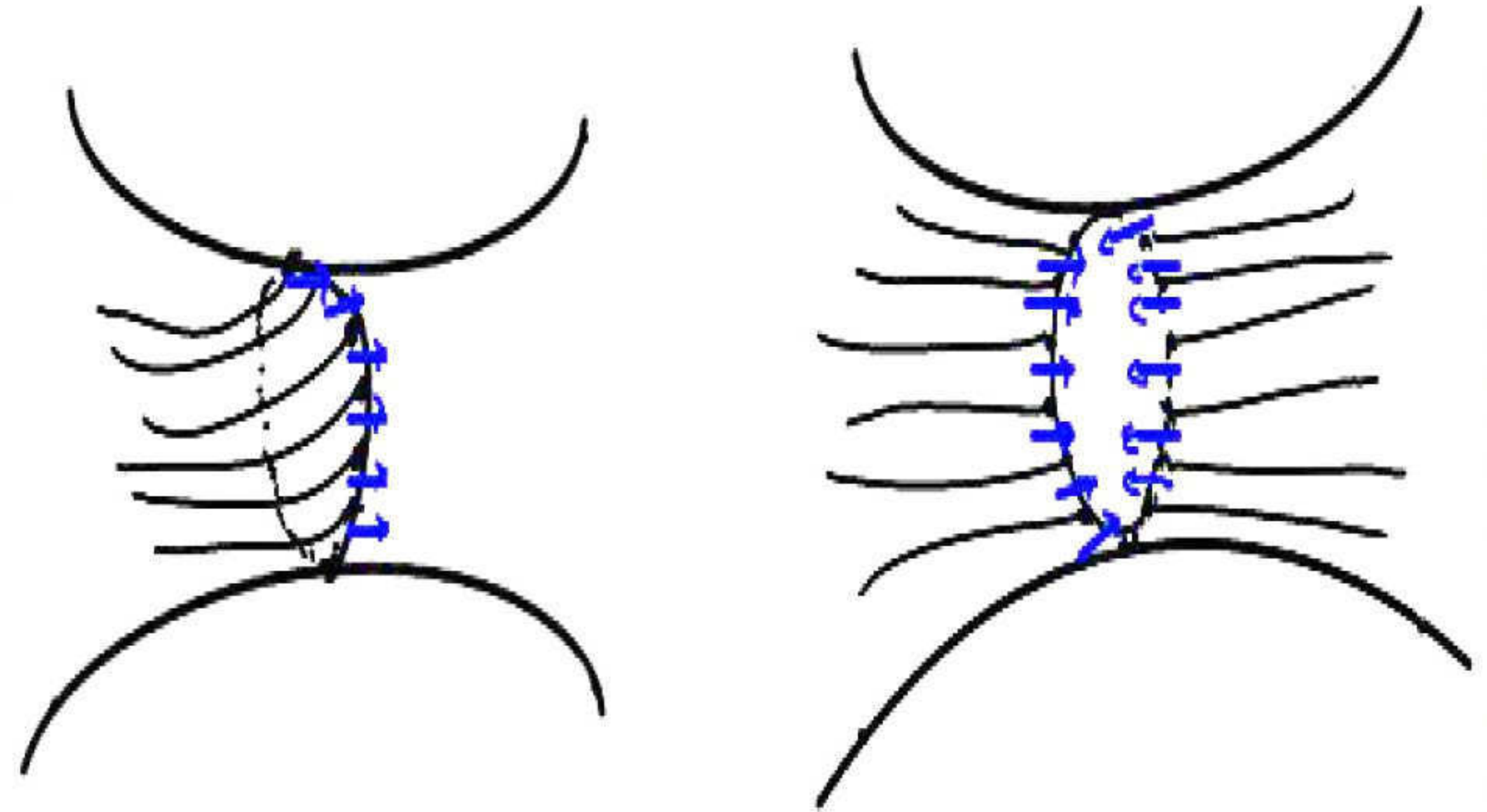




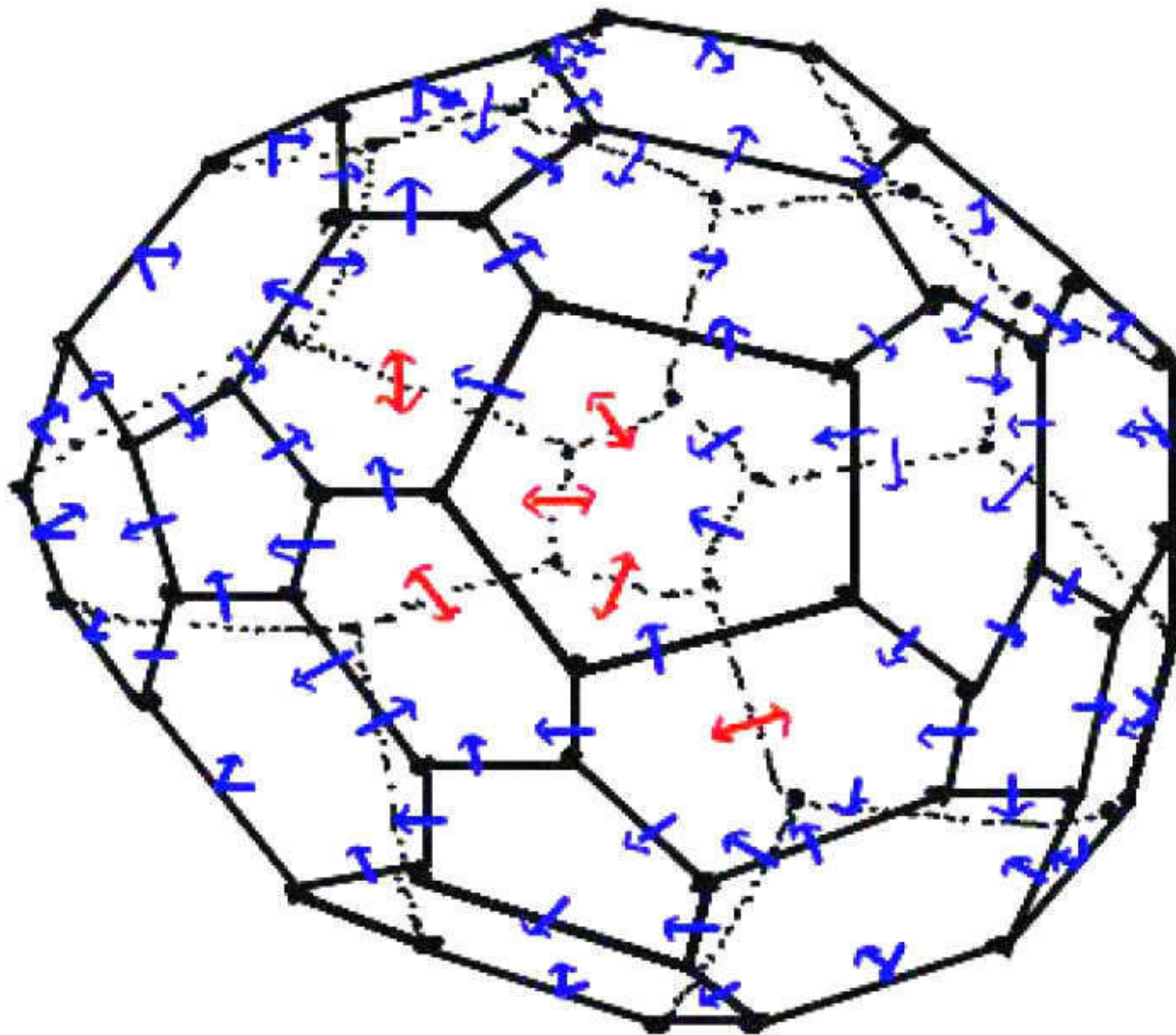
(analogously, a High Klein Bottle)

**NB: Again if we were to cap it off, we get -6**

We glue two such monsters along that face 6 degree of freedom, to make a tight diagram?







-6

I don't know, we were a disgusting bunch of egoistic  
trumping Mathematical ideograms ♡

No dim continuous in our → **Tea Break :-)**  
for Path Coherence Of Thought ♡





## New algebras life

.....

- ~ We derived some more credible necessarian primordial logics
- ♡ ~ Some beautiful things we've been ignoring! ♡

## Applications (Monstrously Forceful!)

- ~ IP plaques to large-calibre project. Enough said
- ~ It's certainly not a fanfare! ♡

**May the party go on, pls!**







# Thank You