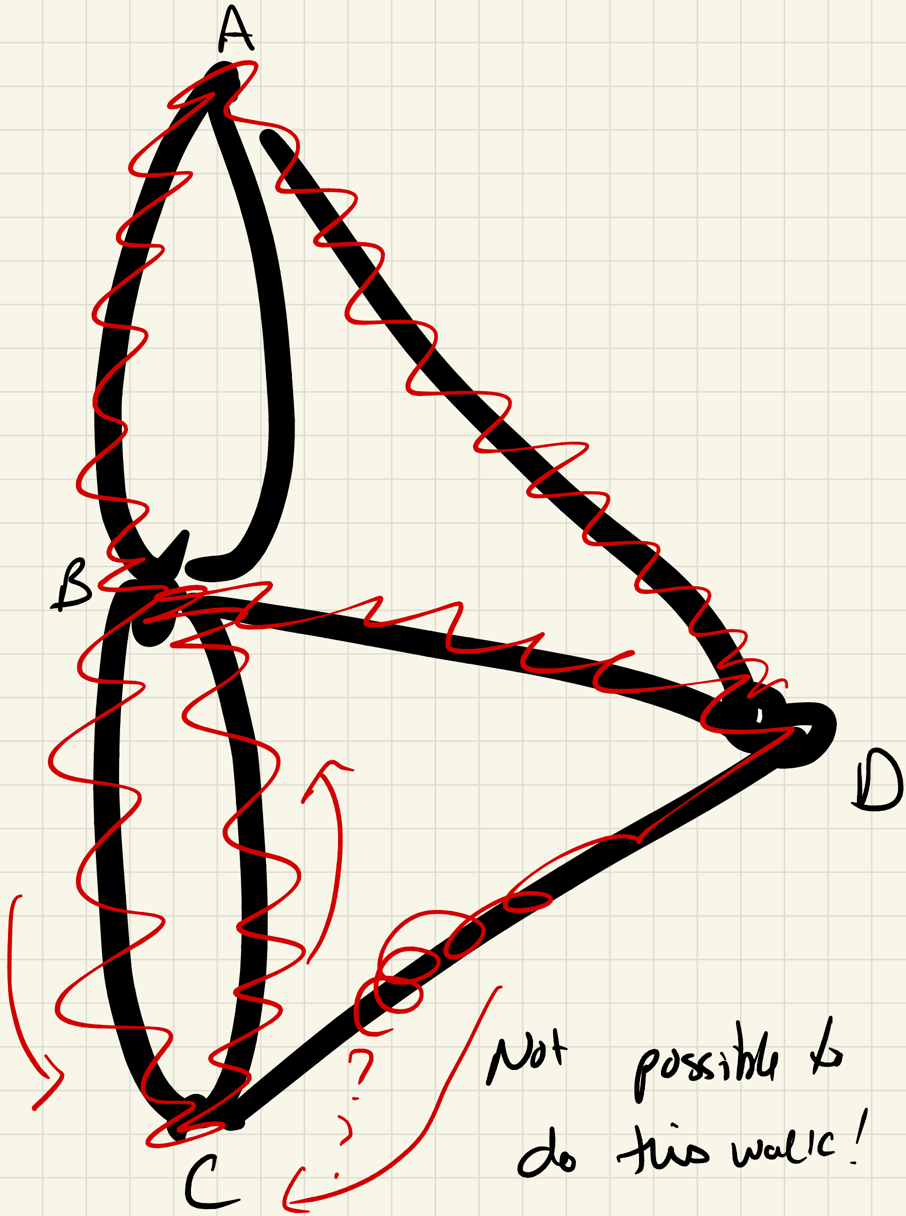
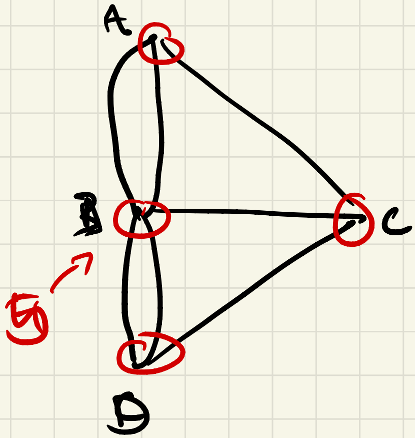
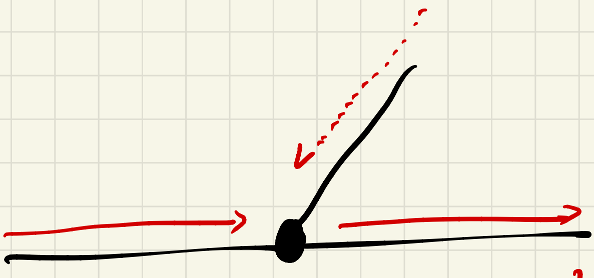


Not possible to do this walk!



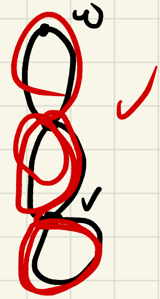
degre is always odd

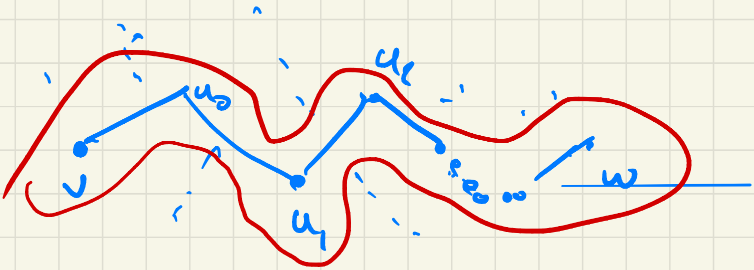


You get stuck!

Walk between v an w

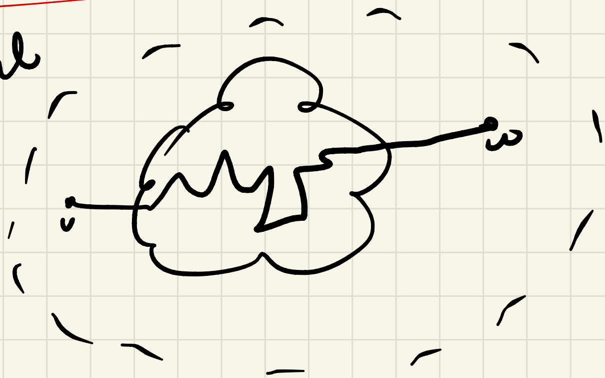
$v\, e\, u_0\, e\, u_1\, e\, u_2\, e \dots e\, w$



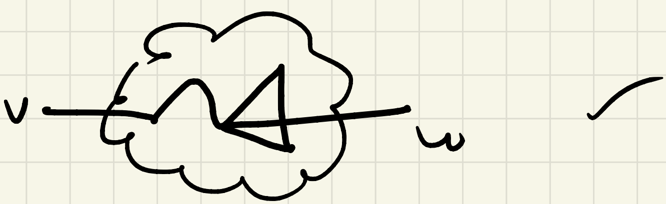


walk

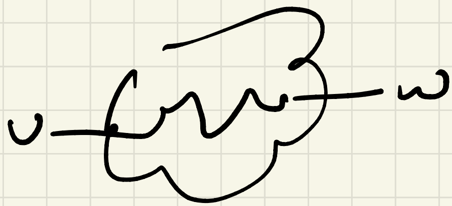
Trail



no repeated edges

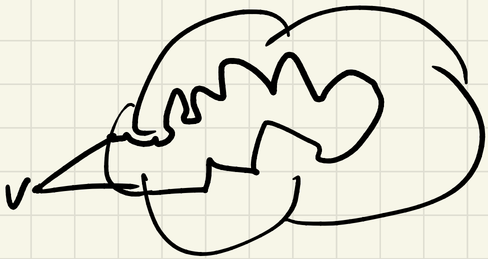


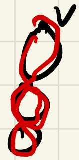
Path from v to w



never repeat an edge

Closed walk



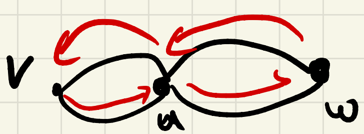


Comes back to where it starts!

Circuit

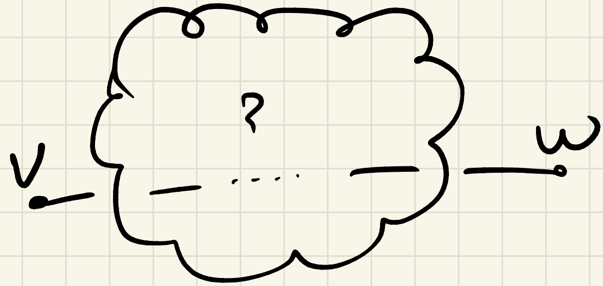
Simple circuit

Also no repeat vertexes



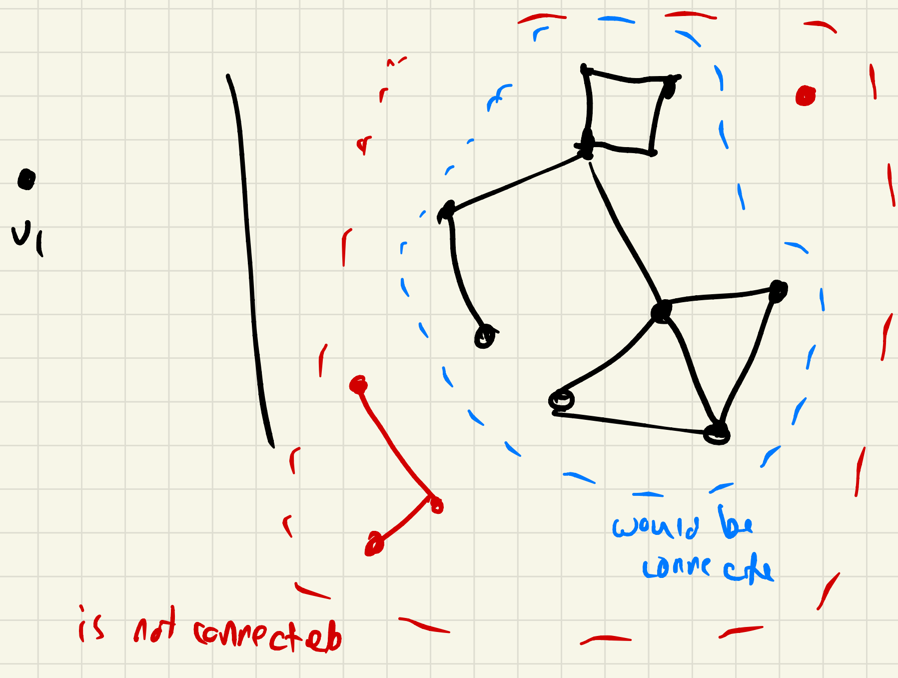
- Do not use an edge twice
- End up where you start

Connectedness

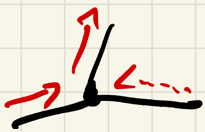


if so, we say v and w are connected!

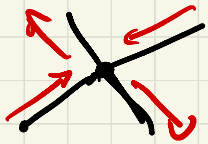
If every pair of ~~vertices~~ is connected, the graph is connected.



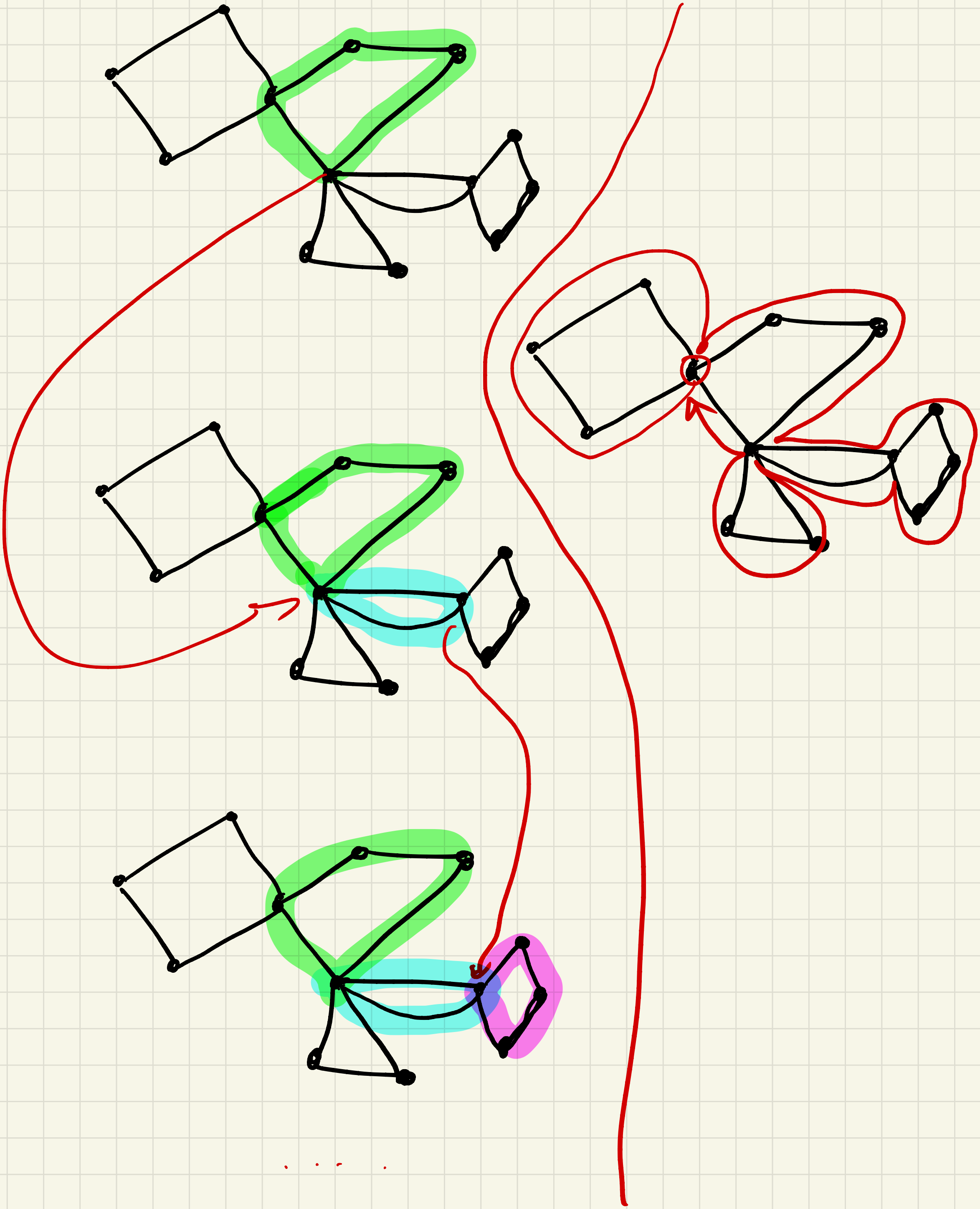
If all the degrees of the vertices in a graph are even then there exists an Euler circuit

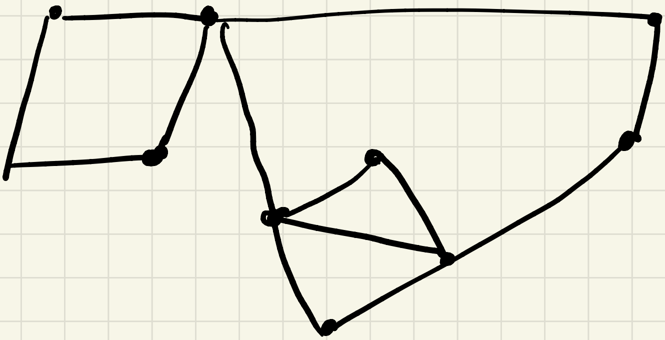


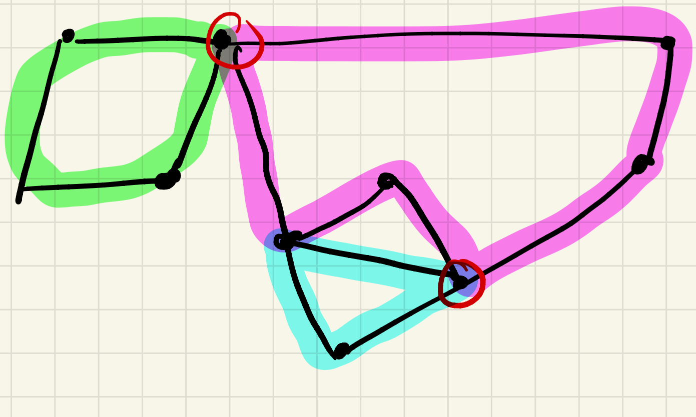
Your circuit gets stuck at odd vertics



You can't get stuck at even degree vertices!

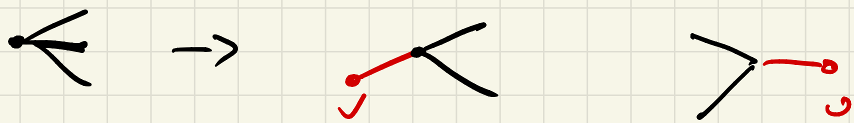


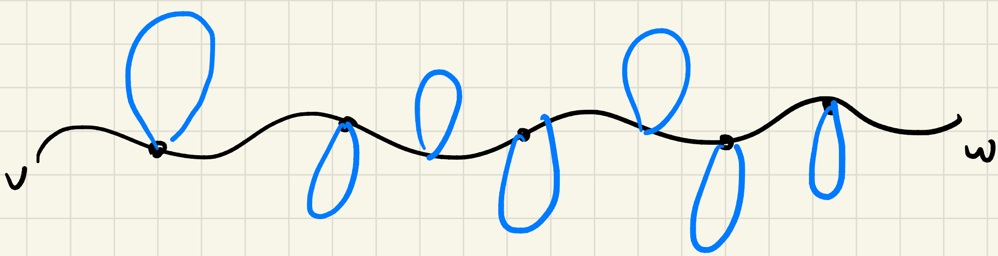




Euler Trail

Like a Euler circuit but you start and end at different points.

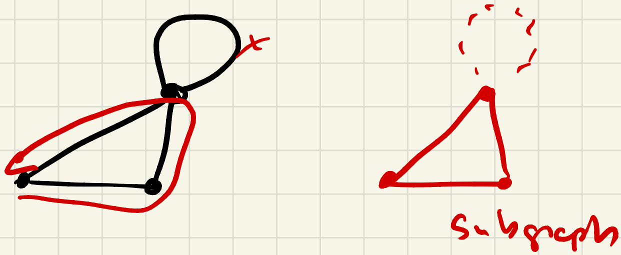




Adding Euler circuits

Hamilton Circuits

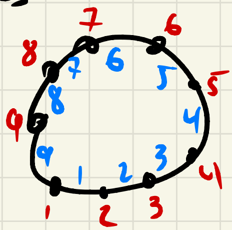
It must have a subgraph H



It must be the case that H contains vertices of G

It must be connected.

H must have the same number of edges



Every vertex of H has degree 2