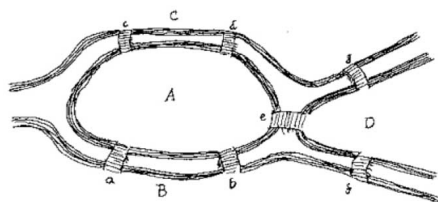


Warmup

Draw, if possible:

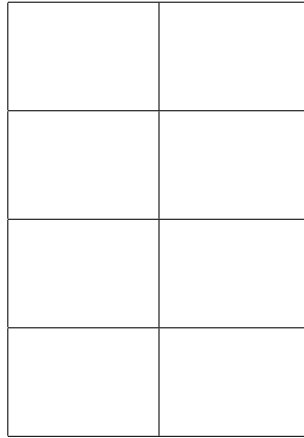
1. A tree with 5 vertices, 3 of which have degree 1
2. A tree with 5 vertices, 2 of which have degree 1
3. A tree with 5 vertices, only 1 of which has degree 1
4. A graph with 5 vertices, only 1 of which has degree 1
5. What are the diameters of the above graphs?

Have you found a path that crosses each bridge once?



Hamilton Paths

Is there a path that visits every vertex? How about a cycle?



Planar Graphs

Make a few connected graphs. Find the number of edges, vertices, and faces, and come up with a hypothesis about the relation. (Hint: the relation is linear.)