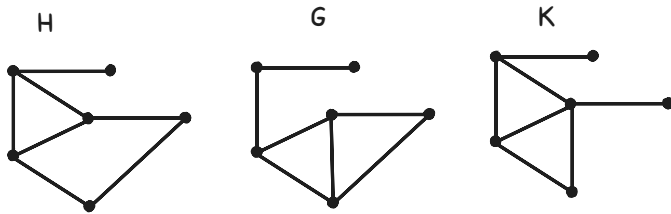


## Lesson 15 — Graph isomorphisms

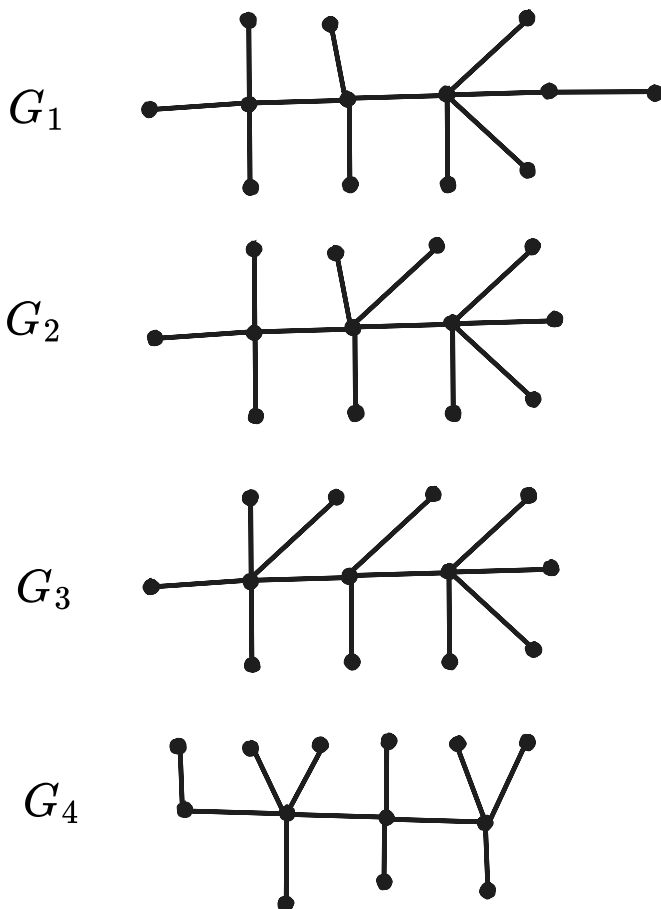
### Problem 1 (10 points)

For each pair of graphs below, decide if the two graphs are isomorphic to each other. For a pair of isomorphic graphs, state which vertices in the first graph correspond to which vertices in the second graph. For a pair of non-isomorphic graphs, explain why the two graphs are not isomorphic.



### Problem 2 (10 points)

For each pair of graphs below, decide if the two graphs are isomorphic to each other. For a pair of isomorphic graphs, state which vertices in the first graph correspond to which vertices in the second graph. For a pair of non-isomorphic graphs, explain why the two graphs are not isomorphic.



### Problem 3 (10 points)

For each pair of graphs below, decide if the two graphs are isomorphic to each other. For a pair of isomorphic graphs, state which vertices in the first graph correspond to which vertices in the second graph. For a pair of

non-isomorphic graphs, explain why the two graphs are not isomorphic.

