Today: Synthesis: Kruskal's algorithm (graphs, union-find, pairing heap).
**Next class:** Synthesis and review: Dijkstra's algorithm (skew heap).

1. List the members of your group below. Underline your name.

2. Trace the operation of Kruskal's minimum spanning tree algorithm on the following graph. Indicate each edge that is examined and whether it is accepted or rejected. Depict, after each edge acceptance, (1) the pairing heap used to organize unexamined edges, (2) the forest of accepted edges forming the partial minimum spanning tree, and (3) the forest of the union-find data structure in both tree and array form. Construct the initial pairing heap by inserting edges in lexicographic order of edge names, where an edge (u, v) is named uv if $u < v$ and vu otherwise. For the union-find data structure, use path compression and union by rank.
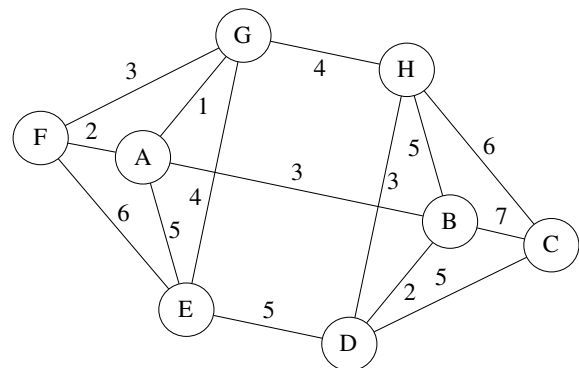
[additional space for answering the earlier question]