1. A strongly connected component, C, of a graph G = (V, E) is the largest subset of vertices C ⊆ V such that for every pair of vertices v, w ∈ C we have a path from v to w and a path from w to v.

a) Find the strongly connected components in the below graph:

b) The transpose of a graph G = (V, E), denoted $G^T$, has the same vertices as G and the same edges, except all the edges are reversed. Draw $G^T$ below.

c) The algorithm to compute the strongly connected components for a graph is:
1. Call dfs for the graph G to compute the finish times for each vertex.
2. Compute $G^T$.
3. Call dfs for the graph $G^T$, but in the main loop of dfs, explore each vertex in decreasing order of finish time.
4. Each tree in the forest computed in step 3 is a strongly connected component.

Trace the algorithm