

## Assignment 7

Consider Theorem 5.4.1 on page 97 of the course notes. The part of this Theorem that asserts a connected graph contains a spanning tree has been proven by *removing* edges from the graph until one is left with a spanning tree.

Reprove this part of the theorem, but do so by recursively constructing a spanning tree by *adding* edges to create a subgraph. Describe the steps carefully, note why each step is possible, and why your process (algorithm) will end with the desired object.