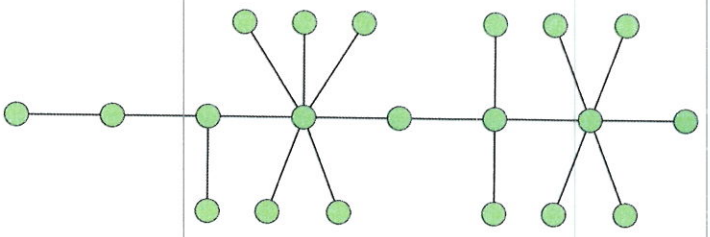
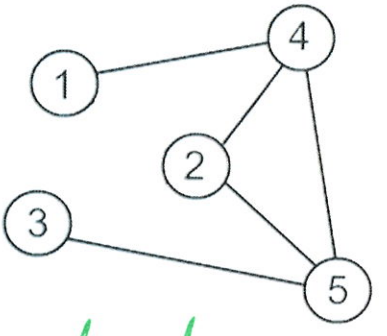
MAT 100, Quiz #7, Summer 2017 Name KEY

Instructions: Show all work. Use exact answers unless otherwise directed to round.

1. Identify which of the following graphs are trees. If a graph is not a tree, calculate its redundancy.

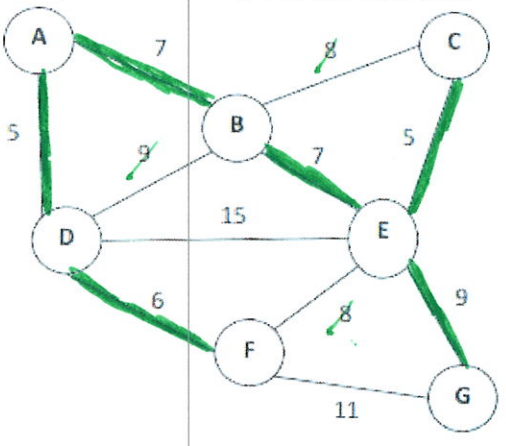


tree



redundancy of 1

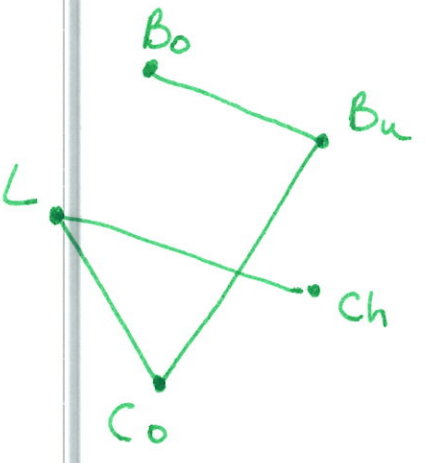
2. Use Kruskal's Algorithm to find the minimum weight spanning tree for the network. Be sure to clearly state the weight of the final tree.



5+5+6+7+7+9
= 39

3. Use Kruskal's Algorithm on the table below to find the minimum spanning tree for the network. Be sure to clearly state the weight of the final tree. Recall that the top right and bottom left of the table are identical so you will have to cross off two entries for each edge.

	Boston	Buffalo	Chicago	Columbus	Louisville
Boston	•	~~446~~	963	735	941
Buffalo	~~446~~	•	522	~~326~~	532
Chicago	963	522	•	~~292~~	~~209~~
Columbus	735	~~326~~	~~292~~	•	~~209~~
Louisville	941	532	~~292~~	~~209~~	•



209 + 292 + 326 + 446 = 1273