

Quiz 1

Date: Jan 18

1. Let G be an undirected graph, with costs on edges. In each of the following questions, answer TRUE or FALSE.
 - (a) If all edges of G have distinct costs (that is, no two edges have the same cost), then G has a unique Minimum Spanning Tree.
 - (b) If all edges of G have distinct costs, then the Shortest Path between any two nodes is unique.
 - (c) Let T be a Minimum Spanning tree of G . If we increase the cost of *each* edge by the same amount α , then T continues to be the minimum spanning tree.
 - (d) Let P be a shortest path between two nodes s and t . If we increase the cost of *each* edge of G by the same amount α , then P continues to be the shortest path between s and t .