## Comp 555: BioAlgorithms -- Fall 2013 Problem Set #4 Issued: 11/19/2013      Due: In class 12/03/2013

**Question 1.**

a) For each subset of four points verify that four-point condition is met

b) Sort all pairwise distances increasingly. Starting from the smallest sum triplet, iterate through all triplets until the following condition is met: For a triplet of distances (d1,d2,d3) where d1<d2<d3, calculate delta = d1+d2-d3. If (d1-delta) + (d2-delta) = d3-delta and these set of distances correspond to pairwise distances between 3 points, stop and output delta as trimming parameter

c) Triples of points processed by AdditivePhylogeny algorithm are (in order):

A,B,C

A,BC, D

A,D,F

**Question 2.**

a) LR scan intervals: s1-s3, s4-s5, s6

b) RL scan intervals: s1,s2-s4,s5-s6

c) Uber scan intervals: s1-s3, s2-s4, s3-s6