



6. (10 points) How can you deduce the ancestral character state of a given character for a clade? What data would you need?

7. (30 points: 5 points each) Briefly contrast the following pairs of terms (Use diagrams if they help)

orthology vs. paralogy

shape vs. size in morphometrics

morphological vs. molecular characters

Manhattan vs. Euclidian distance

Biological species concept vs. phylogenetic species concept

ordering vs. polarity of character states