

# Exercises – Phylogenetics

Universität Bielefeld, WS 2015/2016,  
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<http://wiki.techfak.uni-bielefeld.de/gi/Teaching/2015winter/Phylogenetik>

## Exercise List 14 — 09.02.2016

Due to: –

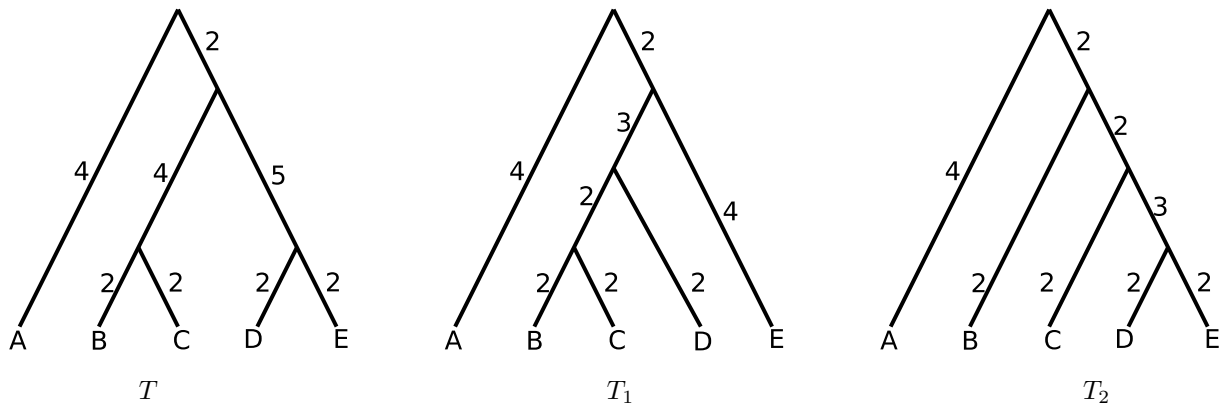
This exercise list does not add points to the 100%. You don't have to do this exercise list in order to be allowed to write the exam. However, we want to give you the opportunity to do some exercises about the new topics. Remember that such exercises can be in the exam as well.

You don't have to hand in your solutions to your T.A., the solutions will be discussed at the 11th Feb. after the "regular" exercises. If you still have questions just ask your T.A. (or me):

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### Exercise 1 Comparison of trees.

(0 Points)



Calculate the following distances between  $T$  and  $T_1$  and between  $T$  and  $T_2$ :

- Symmetric distance
- Robinson-Foulds distance
- Quartets distance

### Exercise 2 Consensus trees.

(0 Points)

Consider the given trees above. Determine the *strict consensus* of the trees  $T$  and  $T_1$  and determine the  $M_{50}$  *consensus* of all three trees. Proceed as follows:

- Write down all splits that have to be contained in the resulting tree. You don't have to determine trivial splits.
- Draw the tree.