

# Tree Interpretation

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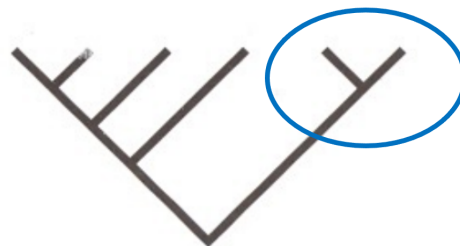
### 4.2.1a: Tree Interpretation

In this practical we will be testing what we learnt in the lecture to interpret trees. We will be checking we know all the parts of the tree, and that we understand the basic information displayed in a tree.

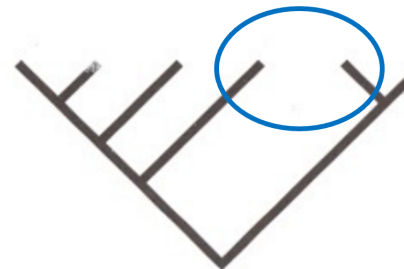
For this first practical, we just need a word document (or other document type that allows pasting of images and adding arrows and text boxes.)

For reference, here are a few of the diagrams from the slides that might help you here!

#### Parts of a Tree



Monophyletic –  
sharing a single  
common ancestor



Not monophyletic

Monophylogeny |:——:|

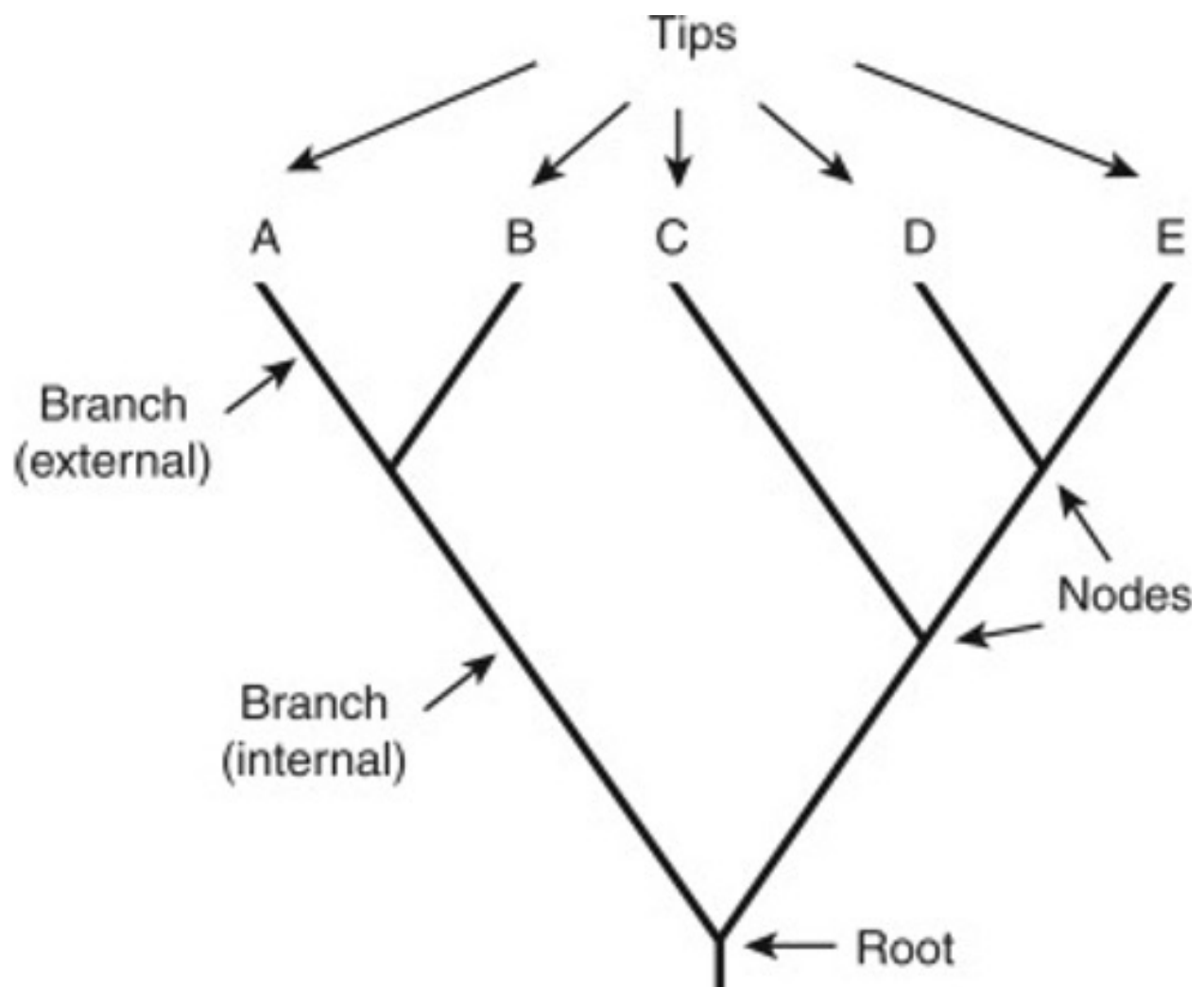
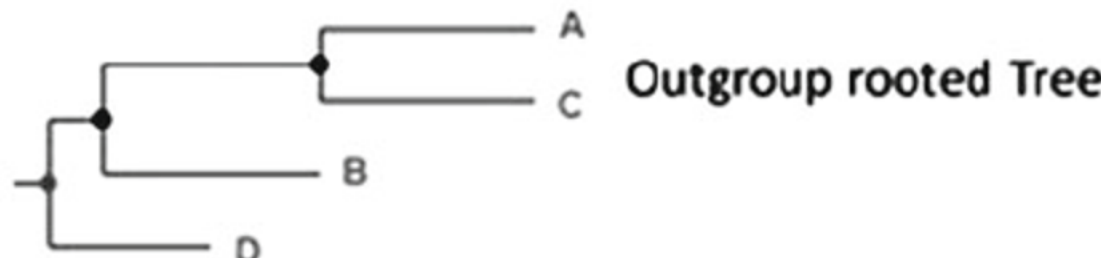


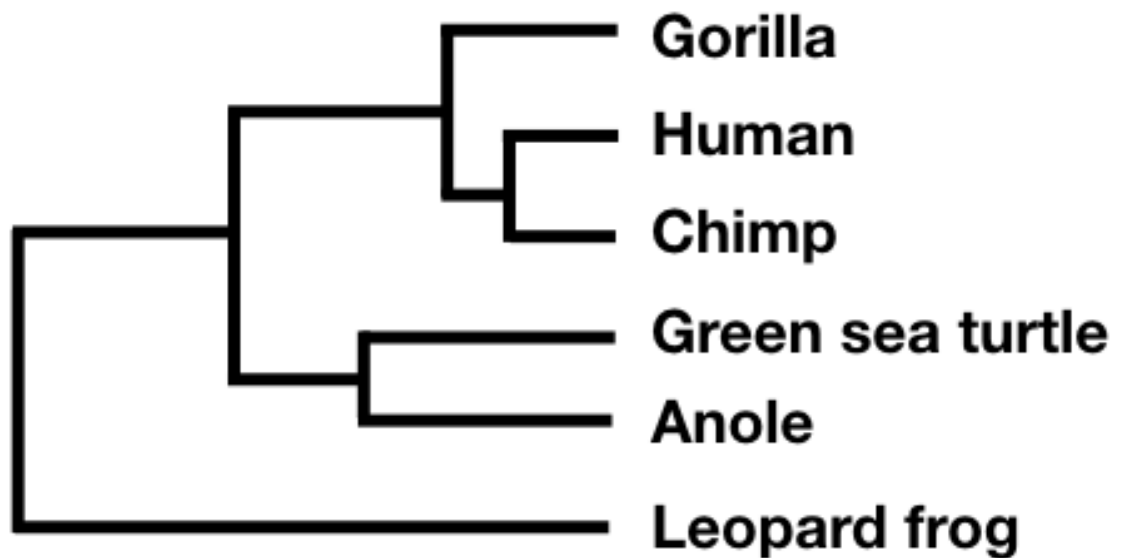
Figure 1: alt text



Rooting Trees |:—:|

#### 4.2.1a.1 A Simple Tree

We'll start off with a simple tree.



|:—:|

### **Task 1**

Discussing with the person next to you, identify the following parts of the tree: 1. Tip 2. Branch 3. Node

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### **Task 2**

Give examples of species in this tree that form: 1. A monophyletic group 2. A non-monophyletic group 3. Which of the above could be described as a 'clade'?

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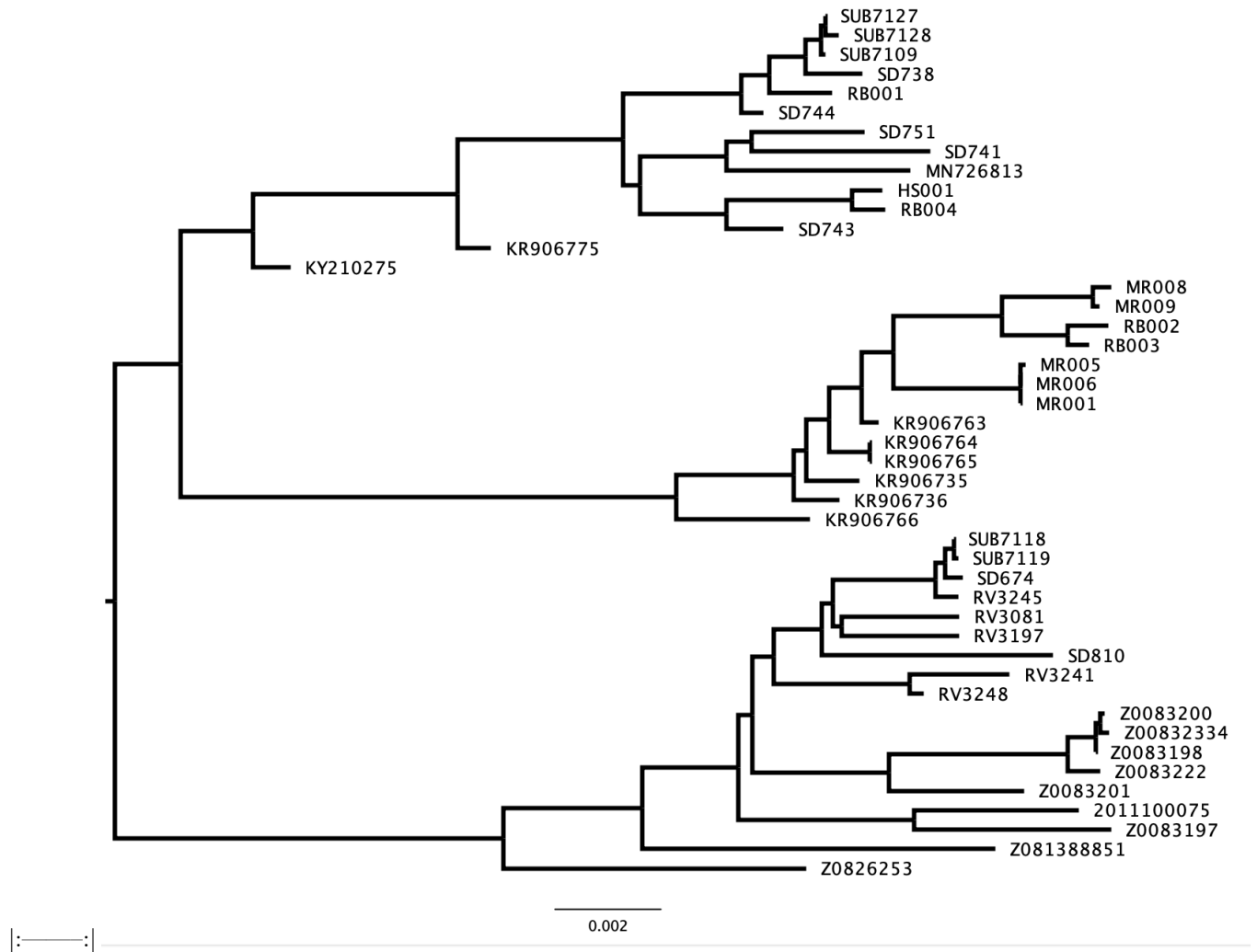
### **Task 3**

From this tree, which is the most closely related species to Humans? Which is most distantly related?

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### **4.2.1a.2 A More Complex Tree**

Now we've practiced on a simple tree, can we apply the same knowledge to a more complicated tree?



### Task 3

Discussing with the person next to you, identify the following parts of the tree: 1. Tip 2. Branch 3. Node 4. Root

### Task 4

There are 3 major clades within this tree. Can you identify the nodes that define these clades?

### Task 5

From this tree, which sequences are most closely related to SD743?

**Task 6**

Which node represents the most recent common ancestor of sequences MR001 and KR906766?

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**Task 7**

What do the branch lengths represent in this tree?

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**4.2.1a.3 Types of Tree**

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**Task 8**

Looking at the simple and complex trees you have in your document, which of these appears to be outgroup rooted and which appears to be midpoint rooted?

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