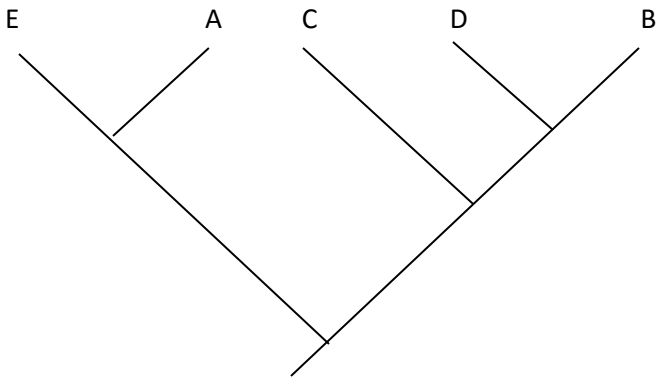
1. Map the following characters onto the tree below following the principle of parsimony.
    a. How many changes needed to occur to get character 1?
    b. How many changes needed to occur to get character 3?

	Taxon A	Taxon B	Taxon C	Taxon D	Taxon E
Character 1	0	1	1	1	0
Character 2	1	0	0	0	0
Character 3	0	1	1	0	0
Character 4	0	1	0	0	0
Character 5	0	0	0	0	0



2. Can you infer a tree from the character matrix below?

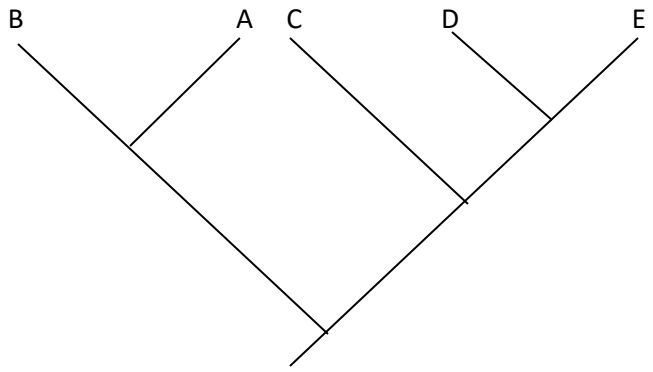
	Taxon A	Taxon B	Taxon C
Joints	0	0	1
Limbs	0	1	1
Eyes	1	1	1

3. Can you infer a tree from the character matrix below?

	Taxon A	Taxon B	Taxon C	Taxon D
Limbs	0	1	1	1
Joints	0	1	1	0
Eyes	1	1	1	1
Claws	0	0	1	0

4. Map the following characters onto the tree below following the principle of parsimony.
    a. How many changes were there in your tree overall?
    b. How many changes needed to occur to place character 3?

	Taxon A	Taxon B	Taxon C	Taxon D	Taxon E
Joints	0	0	1	1	1
Wings	0	0	0	0	1
Spots	1	0	0	1	1
Forelimbs	0	0	1	1	1
Fangs	1	1	0	0	0



5. Attempt to fill in the character matrix using the phylogenetic tree below that has characters mapped onto it.

	Taxon A	Taxon B	Taxon C	Taxon D
Scales				
Wings				
Limbs				
Hair