

2.7.1. Translation and Construction Problems

A. For each of the following trees, cite the construction rule used in each step of the tree.

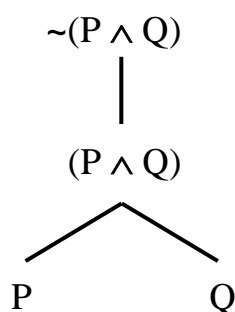
Atomic Sentences:

1. Sentence letters are formal sentences.

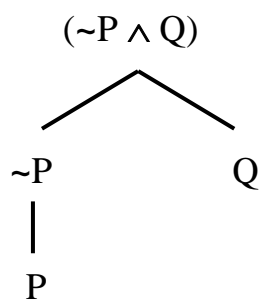
Molecular Sentences:

2. If \blacktriangle is a formal sentence, then $\sim\blacktriangle$ is a formal sentence.
3. If \bullet and \blacktriangle are formal sentences, then $(\bullet \wedge \blacktriangle)$ is a formal sentence.
4. If \bullet and \blacktriangle are formal sentences, then $(\bullet \vee \blacktriangle)$ is a formal sentence.

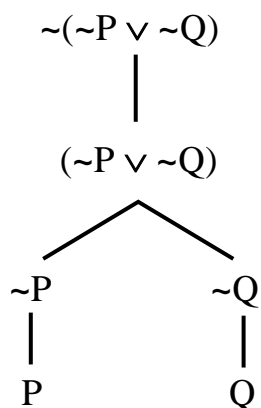
Tree 1



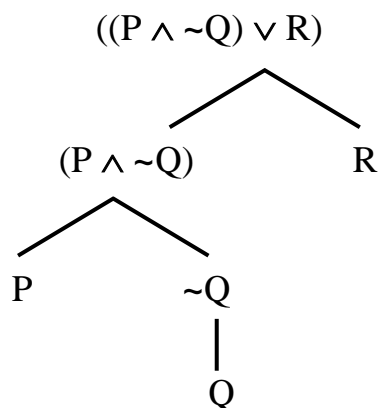
Tree 2



Tree 3



Tree 4



B. Translate each of the following English sentences into the formal language. (For each translation, first build a **translation key** linking English subject matter sentences with sentence letters.)

1. Jake quit his job and joined a cult, and he also shaved his head.
2. Both Trixie and Elvis will stay in Las Vegas, even though the casinos aren't hiring.
3. Although Jack is incapable of flight, both birds and squirrels fear him.
4. Suki's having either shrimp toast or salmon, or she's having unagi.
5. Unless Rex helps us move the furniture, we'll either have to hire movers or finish the job tomorrow.
6. Neko is a cat who both Letitia and Lucretia are fond of.
7. Dr. Slim is a therapist who practices medicine without having a license.
8. Though Neko is a cat who had a big lunch, she will not skip dinner.
9. Lucretia won't attend goth night at Novo even though she's a night-dweller who dresses in black.
10. Letitia passed the Psych exam, and she did so without studying.
11. Kitty won't win unless she draws either a 7 Bam or a joker.
12. Neither Suki nor Barbie nor Trixie will travel with Dr. Slim.
13. Rex likes pie but Barbie doesn't, though they both like milkshakes.
14. Trixie passed the exam without studying for it, and so did Suki.