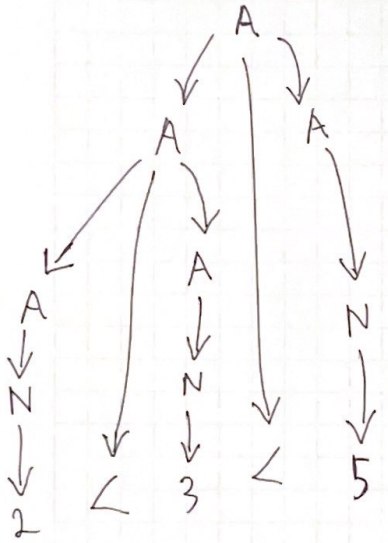
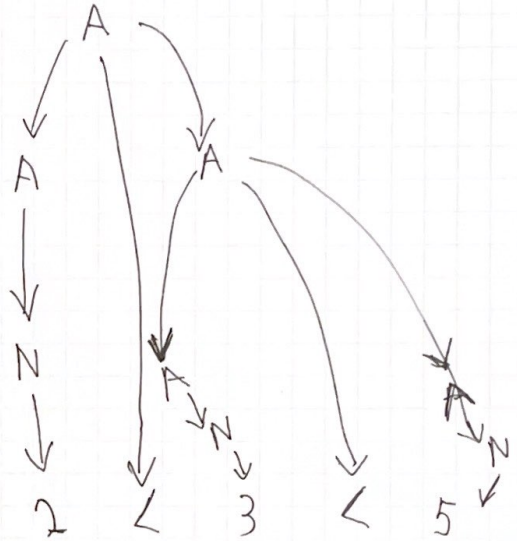
Problem 4

A → A<A | A>A | A != A | A==A | (A) | N

N → 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9

For the derivation A → 2<3<5 we have two different parse trees:





thus, the CFG is ambiguous

This is bad if we are trying to represent a programming language because it makes the language ambiguous. So a statement that we write in that language can have more than one meaning and that can generate confusion and unexpected behavior.