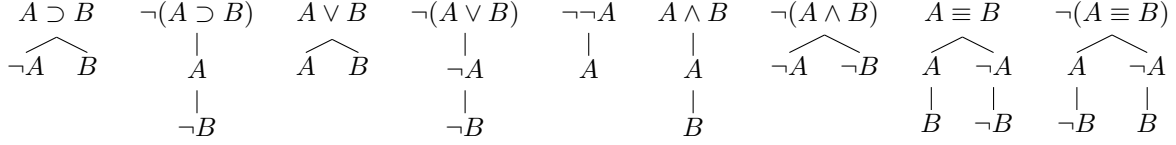


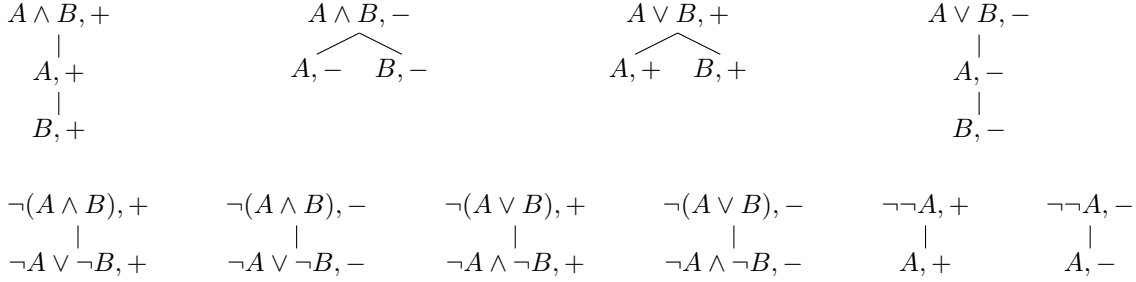
1 Tableaux for classical propositional logic

Initial list for $A_1, \dots, A_n \models B$ is with $\neg B$. Closure condition: A and $\neg A$ for some formula A occur on a branch.



2 Semantic tableaux for FDE

Initial list for $A_1, \dots, A_n \models B$ is with all $A_n, +$ and $B, -$. Closure condition: $A, +$ and $A, -$ for some formula A occur on a branch.



3 Semantic tableaux for K_3, LP, L_3, RM_3

3.1 K_3

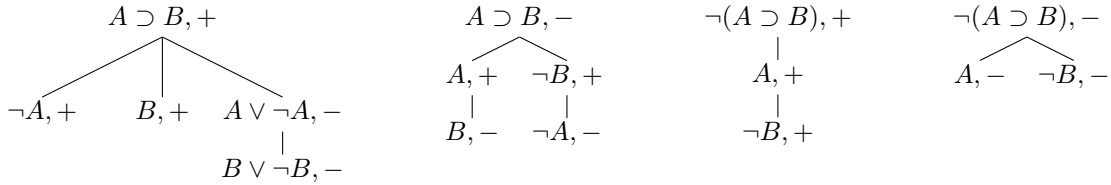
Same as for FDE with extra closure condition: A branch also closes if it contains $A, +$ and $\neg A, +$ for some formula A .

3.2 LP

Same as for FDE with extra closure condition: A branch also closes if it contains $A, -$ and $\neg A, -$ for some formula A .

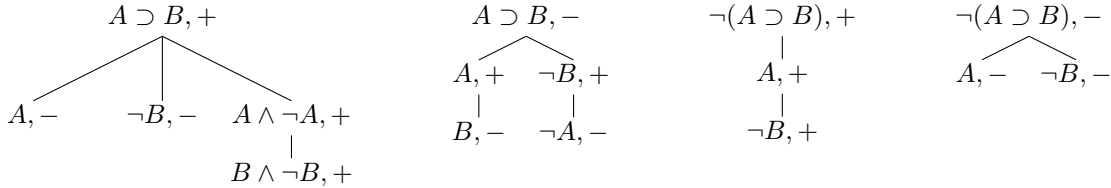
3.3 L_3

Like K_3 but with the following rules for \supset :



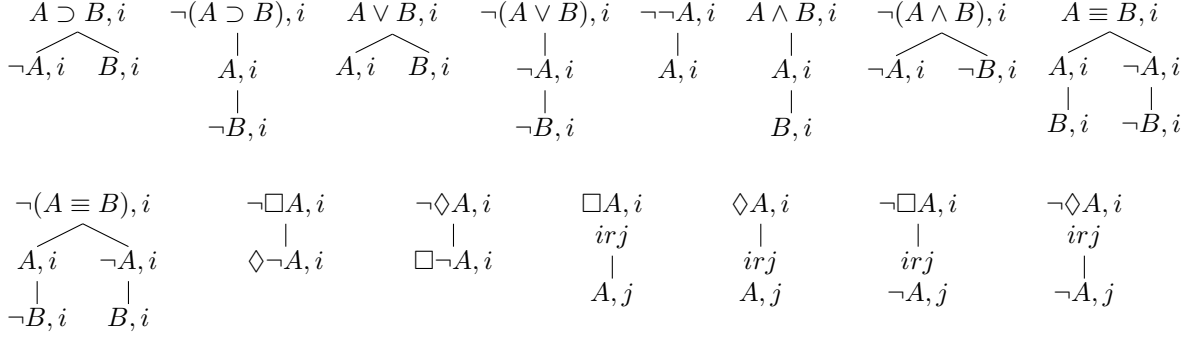
3.4 RM_3

Like LP but with the following rules for \supset :



4 Tableaux for modal logic

Initial list for $A_1, \dots, A_n \models B$ is with all $A_n, 0$ and $\neg B, 0$. Closure condition: A, i and $\neg A, i$ for some formula A occur on a branch with the same number i .



4.1 Restrictions

Reflexive (ρ):



Transitive (τ):



Extra rules for $=$:



Symmetric (σ):



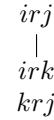
Universal (v):



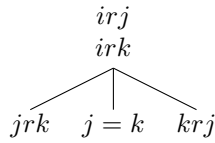
Extendable (η):



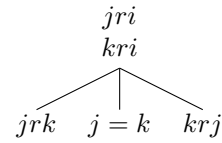
Dense (δ):



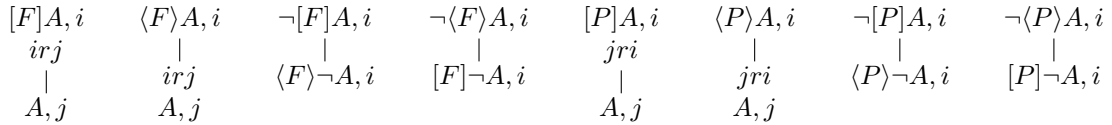
Forward convergent (φ):



Backward convergent (β):

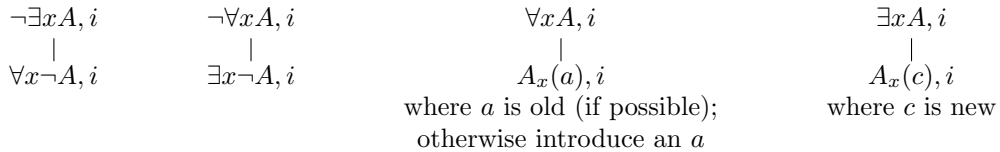


4.2 Tense logic



5 First-order modal logic

5.1 CK



5.2 VK



a is old, if possible; otherwise introduce a new a , c is a new variable