

$$\neg \Box A, i$$

$$\downarrow$$

$$\Diamond \neg A, i$$

$$\neg \Diamond A, i$$

$$\downarrow$$

$$\Box \neg A, i$$

Both need to be true $\begin{cases} \Box A, i \\ iRj \end{cases}$

$$\downarrow$$

$$A, j$$

$$\Diamond A, i$$

$$\downarrow$$

j has to be new $\begin{cases} iRj \\ A, j \end{cases}$

$$(A \supset B), i$$

$$\swarrow \quad \searrow$$

$$\neg A, i \quad B, i$$

$$(A \vee B), i$$

$$\swarrow \quad \searrow$$

$$A, i \quad B, i$$

$$\neg(A \wedge B), i$$

$$\swarrow \quad \searrow$$

$$\neg A, i \quad \neg B, i$$

$$\neg(A \supset B), i$$

$$\downarrow$$

$$A, i$$

$$\neg B, i$$

$$\neg(A \vee B), i$$

$$\neg A, i$$

$$\neg B, i$$

$$(A \equiv B), i$$

$$\swarrow \quad \searrow$$

$$A, i \quad \neg A, i$$

$$B, i \quad \neg B, i$$

$$(\neg \neg A), i$$

$$A, i$$

$$(A \wedge B), i$$

$$A, i$$

$$B, i$$

$$\neg(A \equiv B), i$$

$$\swarrow \quad \searrow$$

$$\neg A, i \quad A, i$$

$$B, i \quad \neg B, i$$

ρ (rho), reflexivity: for all w , wRw .

σ (sigma), symmetry: for all w_1, w_2 , if w_1Rw_2 , then w_2Rw_1 .

τ (tau), transitivity: for all w_1, w_2, w_3 , if w_1Rw_2 and w_2Rw_3 , then w_1Rw_3 .

η (eta), extendability: for all w_1 , there is a w_2 such that w_1Rw_2 .

ρ
•
↓
 iRi

τ
 irj
 jRk
↓
 iRk

σ
 iRj
↓
 jRi

η
•
↓
 iRj

Tableaux Rules for C

$A > B, i$
 $iR_A j$
↓
 B, j

$\neg(A > B), i$
↓
j has to be new $\begin{cases} iR_A j \\ \neg B, j \end{cases}$

Tableaux Rules for C+

$\neg(A > B), i$
↓
j has to be new $\begin{cases} iR_A j \\ A, j \\ \neg B, j \end{cases}$

•
↙ ↘
 $\neg A, i$ A, i
 $iR_A i$

Strict Conditional

$A \rightarrow B \leftrightarrow \Box(A \supset B)$

K3, L3, LP, RM3

K3 - designated truth value = 1
i=neither true nor false

\supset	1	i	0
1	1	i	0
i	1	i	i
0	1	1	1

L3 - designated truth value = 1
i=neither true nor false

\supset	1	i	0
1	1	i	0
i	1	1	i
0	1	1	1

LP - designated truth values = 1, i
i=both true and false

\supset	1	i	0
1	1	i	0
i	1	i	i
0	1	1	1

RM3 - designated truth values = 1, i
i=both true and false

\supset	1	i	0
1	1	0	0
i	1	i	0
0	1	1	1