

Three-Valued Logics, Semantics

I. Bochvar semantics

P	$\sim P$
T	F
U	U
F	T

P	$\bullet$	Q
T	T	T
T	U	U
T	F	F
U	U	T
U	U	U
U	U	F
F	F	T
F	U	U
F	F	F

P	$\vee$	Q
T	T	T
T	U	U
T	T	F
U	U	T
U	U	U
U	U	F
F	T	T
F	U	U
F	F	F

P	$\supset$	Q
T	T	T
T	U	U
T	F	F
U	U	T
U	U	U
U	U	F
F	T	T
F	U	U
F	T	F

II. Kleene semantics

P	$\sim P$
T	F
U	U
F	T

P	$\bullet$	Q
T	T	T
T	U	U
T	F	F
U	U	T
U	U	U
U	F	F
F	F	T
F	F	U
F	F	F

P	$\vee$	Q
T	T	T
T	T	U
T	T	F
U	T	T
U	U	U
U	U	F
F	T	T
F	U	U
F	F	F

P	$\supset$	Q
T	T	T
T	U	U
T	F	F
U	T	T
U	U	U
U	U	F
F	T	T
F	T	U
F	T	F

### III. Lucasiewicz semantics

P	$\sim P$
T	F
U	U
F	T

P	•	Q
T	T	T
T	U	U
T	F	F
U	U	T
U	U	U
U	F	F
F	F	T
F	F	U
F	F	F

P	∨	Q
T	T	T
T	T	U
T	T	F
U	T	T
U	U	U
U	U	F
F	T	T
F	U	U
F	F	F

P	$\supset$	Q
T	T	T
T	U	U
T	F	F
U	T	T
U	<b>T</b>	U
U	U	F
F	T	T
F	T	U
F	T	F