

Math 2283 - Introduction to Logic

Quiz #8 - 2006.10.06

Solutions

Determine if the following Sentential argument is valid by constructing a truth table.

$$((P \wedge Q) \Rightarrow R)$$

$$((Q \vee R) \Rightarrow S)$$

$$((S \vee R) \Leftrightarrow (Q \wedge S))$$

$$\therefore ((P \Rightarrow R) \vee (S \Rightarrow Q))$$

P	Q	R	S	$((P \wedge Q) \Rightarrow R)$	$((Q \vee R) \Rightarrow S)$	$((S \vee R) \vee (S \Rightarrow Q))$	$((P \Rightarrow R) \vee (S \Rightarrow Q))$
T	T	T	T	T	T	T	T
T	T	T	F	T	T	F	T
T	T	F	T	T	T	T	F
T	T	F	F	T	T	F	F
T	F	T	T	F	T	T	T
T	F	T	F	F	T	F	T
T	F	F	T	F	F	F	F
T	F	F	F	F	T	T	T
F	T	T	T	F	T	T	T
F	T	T	F	F	T	F	T
F	T	F	T	F	T	T	T
F	T	F	F	F	T	F	T
F	F	T	T	F	T	F	F
F	F	T	F	F	T	F	T
F	F	F	T	F	F	F	T
F	F	F	F	F	T	T	T