Discrete Math : Biconditional

Biconditional Symbol

"$\leftrightarrow$" means "if and only if"

"$p \leftrightarrow q$" means "p if and only if q"

Example
'p' stands for "$2+2=4$"
'q' stands for "$2=2$"
'$p \leftrightarrow q$' means "$2+2=4$ if and only if $2=2$"
The truth value for "$p \leftrightarrow q$" is 'T', just in case
"$p \leftrightarrow q$" have the same truth values. Otherwise
"$p \leftrightarrow q$" is "F"

Example 2
'p' stands for "$3+2=4$"
'q' stands for "$3=2$"
"p" T.V is 'F'
"q" T.V is 'F'
"$p \leftrightarrow q$" is 'T'

Truth table for Biconditional

p	q	$p \leftrightarrow q$
T	T	T
T	F	F
F	T	F
F	F	T