

Sections 3.5 & 3.6

30

Two statements are equivalent, symbolized by \equiv , if they have the same truth value in every possible case.

Example 1: a) Show that $p \vee q$ and $\sim q \rightarrow p$ are equivalent. b) Use the result from part (a) to write a statement that is equivalent to I attend classes or I lose my scholarship

Example 2: Show that $\sim[\sim(\sim p)] \equiv \sim p$

Example 3: Select the statement that is not equivalent to

If it's raining, then I need a jacket.

- a. It's not raining or I need a jacket.
- b. I need a jacket or it's not raining.
- c. If I need a jacket, then it's raining.
- d. If I do not need a jacket, then it's not raining