

## Implication $p \Rightarrow q$

Def: An implication  $p \Rightarrow q$  is a true if  $p$  is false or  $q$  is true.

$p$	$q$	$p \Rightarrow q$
T	T	T
T	F	F
F	T	T
F	F	T

## If and only if $p \Leftrightarrow q$

TODO

## Axiom

Def: An axiom is a proposition that is "assumed" to be true

> Axioms can be true in some fields, while false in others.

Axioms should be: 1. consistent 2. complete

Def: A set of axioms is **consistent** if no proposition can be proved to be both true and false.

Def: A set of axioms is **complete** if it can be used to prove every proposition is either true or false.