The Logic Book
Definitions

Arguments, Validity, Soundness

An *argument* is a set of two or more sentences one of which is designated as the conclusion and the others as the premises.

p.9

An argument is *deductively valid* if and only if it is not possible for the premises to be true and the conclusion false. An argument is *deductively invalid* if and only if it is not deductively valid.

p.13

An argument is *deductively sound* if and only if it deductively valid and the premises are true. An argument is *deductively unsound* if and only if it is not deductively sound.

p.14

Logical Truth, Falsehood, Consistency and Equivalence

A set of sentences is *logically consistent* if and only if it is possible for all the members of the set to be true. A set of sentences is *logically inconsistent* if and only if it is not logically consistent.

p.19

A sentence is *logically true* if and only if it is not possible for the sentence to be false.

p.20

A sentence is *logically false* if and only if it is not possible for the sentence to be true.

p.21

A sentence is *logically indeterminate* if and only if it is neither logically true nor logically false.

p.21

The members of a pair of sentences are *logically equivalent* if and only if it is not possible for one of the sentences to be true while the other is false.

p.22