A predicate takes the appropriate number of subjects and results in an atomic sentence.

A function symbol takes the appropriate number of subjects and results in a subject.

A boolean operator takes the appropriate number of sentences and results in a sentence.

A tautology is a sentence whose truth value in a truth table are all true. (A literal cannot be a tautology.)

A sentence is a TW-necessity if it is true in every world where it is defined.

A sentence is TW-possible if there is a world where it is true.

A sentence is a TT-possibility if there is a row in its truth table that is true.

The sentence Q is a tautological consequence of P if when you construct the truth table that includes P and Q, then in any row where P is true, Q is also true. In other words, the sentence $P \rightarrow Q$ is a tautology.

The sentence Q is a logical consequence of P if for any world where both P and Q are defined, then if P is true in that world, then so is Q. In other words, the sentence $P \rightarrow Q$ is a logical necessity.

A contradiction is a sentence that is both true and false.