

Def. Statement

Any sentence that is either **TRUE** or **FALSE** but not both.

Often, statements are represented by using a letter such as **p** or **q**.

Def. Truth Value

**The determination of a statements veracity.
In other words, determining if a statement is
TRUE or FALSE.**

Def. Negation

A statement that has the opposite **TRUTH-VALUE** of a given statement.

To form the negation of a statement, you simply **ADD** or **REMOVE** the word **NOT**.

The symbol for **NOT** is $\sim$

Def. Conjunction

A compound statement formed by joining two or more statements with the word *and*.

Symbol: $p \wedge q \Rightarrow$ Read *p and q*

A conjunction is **TRUE** only when **BOTH** statements are **TRUE**.

Def. Disjunction

A compound statement formed by joining two or more statements with the word *or*.

Symbol: $p \vee q \Rightarrow$ Read p or q

A disjunction is **TRUE** if at least one of the statements is **TRUE**.

Def. Truth table

A convenient method for organizing the truth values of statements.

$$p \wedge \sim q$$

p	q	$\sim q$	$p \wedge \sim q$

Venn Diagrams

