

Def. Conditional Statement

A statement that is in the IF-THEN form.

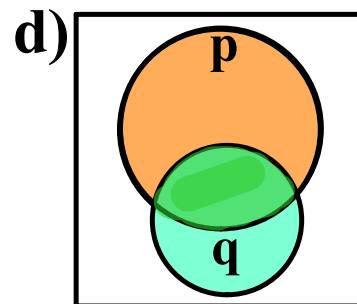
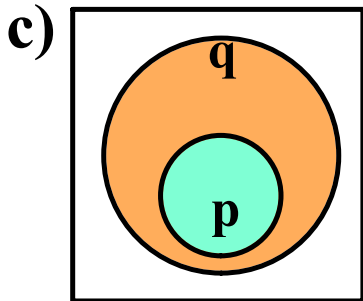
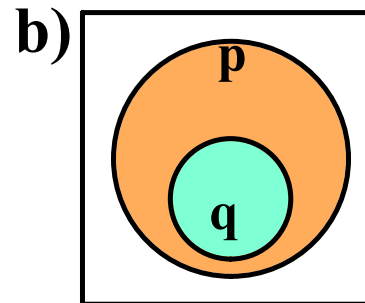
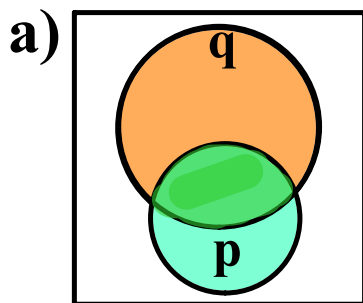
A conditional is represented by the following words:

If p then q

A conditional is represented by the following symbols:

$p \rightarrow q$

Which of the following models represents:
If **p** then **q**?



2 parts of a conditional (IF-THEN) statement

The **IF** part is called the **HYPOTHESIS**

The **THEN** part is called the **CONCLUSION**

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 $\sim$

3 other conditionals formed from a given conditional

If **p** then **q** $\Rightarrow$ **given**

If **q** then **p** $\Rightarrow$ **converse**

If $\sim$ **p** then $\sim$ **q** $\Rightarrow$ **inverse**

If $\sim$ **q** then $\sim$ **p** $\Rightarrow$ **contrapositive**

Logically Equivalent

A **CONDITIONAL** and its **CONTRAPOSITIVE** **ALWAYS** have the same truth-value

The **INVERSE** and **CONVERSE** of a conditional **ALWAYS** have the same truth-value