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| --- | --- | --- | --- |
| A summary based on evidence or facts | | If "p implies q" is true and "q implies r" is true, then "p implies r" is true.  If A then B. If B then C. If A then C. | |
| a statement that contains the words "if and only if". | |  | |
| If a statement is represented by p, then "not p" is the negation of the statement | |  | |
| if p ➡ q is a true conditional statement and p is true, then q is true | |  | |
| Law of Syllogism |  |  | Geometry  by Sharrer  Ch 2  p1/2  conclusion |
|  |  |  | biconditional |
|  |  |  | negation |
|  |  |  | Law of Detachment |
| Inferring general principles from specific examples  Specific -->Generalization | | If not p, then not q  A statement formed by negating the hypothesis and conclusion | |
| reasoning in which a conclusion is reached by stating a general principle and then applying that principle to a specific case (The sun rises every morning; therefore, the sun will rise on Tuesday morning.)  Generalization -->Specific | | If not q, then not p  A statement formed by both exchanging and negating the hypothesis and conclusion | |
| If p, then q  A logical statement that has two parts, a hypothesis and a conclusion | | an example that proves a statement false | |
| -If q, then p  -If conclusion, then hypothesis | | an explanation of observations that are testable through experimentation or observation | |
| inverse |  |  | Geometry  by Sharrer  Ch 2  p2/2  inductive reasoning |
| contrapositive |  |  | deductive reasoning |
| counter-example |  |  | conditional statement |
| hypothesis |  |  | converse |