Inverse, Converse, and Contrapositive:
If we start with the statement $p \to q$, then the chart below (which you need to memorize) shows three related statements.

contrapositive	$\sim q \to \sim p$
inverse	$\sim p \to \sim q$
converse	$q \to p$

→ LE to $p \to q$

> not LE to $p \to q$

Note: The **inverse** and the **negation** of a conditional statement are very, very different!!

inverse: a related CONDITIONAL statement

negation: an AND statement

Example: Consider the statement, "If Elmo received an A on the exam, then he memorized the chart above." Write the:

1. inverse

   If Elmo didn't receive an A on the exam, then Elmo didn't memorize the chart.

2. converse

   If Elmo memorized the chart, then he received an A on the exam.

3. contrapositive

   If Elmo didn't memorize the chart, then Elmo didn't receive an A on the exam.

→ Always L.E. to the original