#1. Principle of Inference or Detachment – If \( p \rightarrow q \) is true and \( p \) is true, then \( q \) is true. In symbols.
\[
(p \rightarrow q) \land p \rightarrow q
\]

#2. Principle of Contraposition or Negative Inference – If \( p \rightarrow q \) is true and \( q \) is false, then \( p \) is false. In symbols
\[
((p \rightarrow q) \land q') \rightarrow p'
\]

#3. Principle of Disjunctive Inference – If \( p \lor q \) is true and \( p \) is false, then \( q \) is true. In symbols
\[
((p \lor q) \land p') \rightarrow q
\]

#4. Principle of Equivalence Inference – If \( p \leftrightarrow q \) is true and \( p \) is true, then \( q \) is true. In symbols
\[
((p \leftrightarrow q) \land p) \rightarrow q
\]

#5. Principle of the Syllogism – If \( p \rightarrow q \) is true and \( q \rightarrow r \) is true, then \( p \rightarrow r \) is true. In symbols
\[
((p \rightarrow q) \land (q \rightarrow r)) \rightarrow (p \rightarrow r)
\]

#6. Principle of Substitution for Variables – 
Example: All men are mortal.
Socrates is a man.
Socrates is mortal.

#7. Principle of Substitution for Statements – If \( p \leftrightarrow q \) is true, then
(a) from any true statement involving \( p \) a true statement results when \( q \) is substituted throughout for \( p \), and
(b) from any false statement involving \( p \) a false statement results when \( q \) is substituted throughout for \( p \).