1. Fully parenthesize each of the following propositional formulas. That is, add parentheses so that the structure is determined by the parentheses without the need for rules of precedence.
2. How many rows are in the truth table of propositional formula ?
3. Construct a truth table of .
4. Using a truth table, show that is a tautology.
5. Suppose that the domain of discourse is the set of all integers. Say whether each of the following is true or false.
6. Are first-order formulas and logically equivalent? (That is, is

valid?) If so, explain why. If not, give definitions of and where they are different.