

**Question.** Show that every compound statement in  $P_1, \dots, P_n$  which is not a tautology (output column consisting entirely of  $T$ 's) can be written in *conjunctive normal form*. That is it can be written as a conjunction of simpler statements, each of which is a disjunction of simpler statements:

$$\bigwedge_i \bigvee_j Q_{ij}$$

where the  $Q_{ij}$  are the  $P_j$  or their negations.

**Handout Questions.** Do problems 5.6, 5.7, 5.8 and 5.9 from the handout (pages 190-191).