Homework, due Fri., Sept. 7

September 5, 2018

1 How many CNF clauses are there?

If our signature is the set of symbols $\{A, B, C\}$, then we refer to $A, \neg A, B, \neg B, C, \neg C$ as *literals*. A *clause* is a disjunction of literals, e.g. the following are all clauses:

$$A \vee \neg B$$
$$\neg A \vee B \vee C$$
$$C$$

Assume that a clause does not contain the same symbol twice, e.g. $B \vee \neg B$ is not a clause. Also assume that order of the literals does not matter, e.g. $A \vee B$ is the same clause as $B \vee A$. Given these assumptions, how many clauses are there for the signature $\{A_1, A_2, ..., A_n\}$?