Bonus Exercise 10: Normal Form Transformation

General Remarks

For solving this exercise you can earn up to one point that is added to the result of the quiz on Jan 8 if you did not get the full points. Note that the maximum of points that can be obtained for both together is five.

Submit your solution until **Monday, Jan 8, 18:00** via Moodle (deadline extension is not possible).

Description of the Task

Start with the Limboole formula contained in formulas.zip that matches the last two digits of your student number. That is if your student number ends with ...42, then you have to select formula '42.limboole'.

Translate the formula into a formula in conjunctive normal form (CNF) by introducing new labels (approach 2). Introduce one label per line. For line n, introduce lable l_n.

Example: Assume line 10 contains `(a & b & c & d)` . Then introduce definition `l10 <-> (a & b & c & d)` which is translated to CNF by multiplication (approach 1).

When you replaced all the conjunctions by their labels, you will get a big clause. For this clause no further label has to be introduced (but it is not wrong if you do it).

Submission

Upload a text file with the formula in CNF in limboole format.