EXAM 13.01.20

$\forall x (Stud(x) \wedge like(x,M)) \Rightarrow (Eat(x,S) \wedge Eat(x,B))$
$\forall x (Stud(x) \wedge like(x,V)) \Rightarrow (Eat(x,B) \wedge Eat(x,I))$
$\forall x (Stud(x) \wedge \neg like(x,M)) \Rightarrow like(x,V)$
$Stud(Fra)$

CNF:
$\neg Stud(x) \vee \neg like(x,M) \vee Eat(x,B)$
$\neg Stud(x) \vee \neg like(x,M) \vee Eat(x,S)$
$\neg Stud(x) \vee \neg like(x,V) \vee Eat(x,B)$
$\neg Stud(x) \vee like(x,M) \vee like(x,V)$
$Stud(Fra)$
$\neg Stud(x) \vee \neg like(x,V) \vee Eat(x,I)$

$KB = \{\{\neg Stud(x), \neg like(x,M), Eat(x,B)\}_1, \{\neg Stud(x), \neg like(x,M), Eat(x,S)\}_2, \{\neg Stud(x), \neg like(x,V), Eat(x,B)\}_3, \{\neg Stud(x), like(x,M), like(x,V)\}_4, \{Stud(Fra)\}_5, \{\neg Stud(x), \neg like(x,V), Eat(x,I)\}_9\}$.
All horn except the fourth one.

The thesis is: $Eat(Fra,B) \vee Eat(Fra,S) \vee Eat(Fra,I)$. I have to negate it!
$\{\neg Eat(Fra,B)\}_6, \{\neg Eat(Fra,S)\}_7, \{\neg Eat(Fra,I)\}_8$.

1 and 2 $\Rightarrow \{\neg Stud(x), \neg like(x,V), Eat(x,B), Eat(x,S)\}_\alpha$
3 and 9 $\Rightarrow \{\neg Stud(x), \neg like(x,M), Eat(x,B), Eat(x,I)\}_\beta$
α and $\beta \Rightarrow \{\neg Stud(x), \neg like(x,M), \neg like(x,V), Eat(x,B), Eat(x,I), Eat(x,S)\}_\gamma$
γ and 4 $\Rightarrow \{\neg Stud(x), Eat(x,B), Eat(x,S), Eat(x,I)\}_\delta$
δ and 5 $\Rightarrow \{Eat(Fra,B), Eat(Fra,S), Eat(Fra,I)\}_\varepsilon$
ε and 6 $\Rightarrow \{Eat(Fra,S), Eat(Fra,I)\}_\zeta$
ζ and 7 $\Rightarrow \{Eat(Fra,I)\}_\eta$
η and 8 $\Rightarrow \{\}$