EXAM 10.02.20

$\forall x\,(pr(x) \wedge \neg wBE(x)) \Rightarrow \neg bF(x)$
$\forall x\,(pr(x) \wedge inMyPc(x)) \Rightarrow prP(x)$
$\forall x\,(prP(x) \wedge inMyPc(x)) \Rightarrow bF(x)$

CNF:

$\neg pr(x) \vee wBE(x) \vee \neg bF(x)$
$\neg pr(x) \vee \neg inMyPc(x) \vee prP(x)$
$\neg prP(x) \vee \neg inMyPc(x) \vee bF(x)$
They are all horn!

$KB = \{\neg pr(x), wBE(x), \neg bF(x)\}_1,$
$\{\neg pr(x), \neg inMyPc(x), prP(x)\}_2,$
$\{\neg prP(x), \neg inMyPc(x), bF(x)\}_3\}.$

The thesis is: $\forall x\,(pr(x) \wedge inMyPc(x)) \Rightarrow wBE(x)$. I have to negate it!
$\neg(\forall x\, \neg pr(x) \vee \neg inMyPc(x) \vee wBE(x)) \rightarrow \{pr(R)\}_4, \{inMyPc(R)\}_5, \{\neg wBE(R)\}_6$

2 and 3 $\Rightarrow \{\neg pr(x), \neg inMyPc(x), bF(x)\}_7$
1 and 7 $\Rightarrow \{\neg pr(x), \neg inMyPc(x), wBE(x)\}_8$
4 and 8 $\Rightarrow \{\neg inMyPc(R), wBE(R)\}_9$
9 and 5 $\Rightarrow \{wBE(R)\}_{10}$
6 and 10 $\Rightarrow \{\}$

$\forall x\,(B(x) \wedge C(x)) \Rightarrow S(x)$
$\forall x\,(C(x) \wedge S(x)) \Rightarrow B(x)$
$\exists x\,(C(x) \wedge S(x) \wedge B(x))$
$\forall r\, \exists y\,(C(y) \Rightarrow W(y,r))$