

Lista 1 - MAC444

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1. a)

2. a) $E(x)$: x é esquiador
 $A(x)$: x é alpinista
 $N(x)$: x gosta de neve
 $C(x)$: x gosta de chuva

$D = \{\text{Tony, Mike, John}\}$

- $E(x) \vee A(x)$
- $\neg A(x) \vee \neg C(x)$
- $N(x) \vee \neg E(x)$
- $\neg C(\text{Mike}) \vee \neg C(\text{Tony})$
- $C(\text{Mike}) \vee C(\text{Tony})$
- $\neg N(\text{Mike}) \vee \neg N(\text{Tony})$
- $N(\text{Mike}) \vee N(\text{Tony})$
- $C(\text{Tony})$
- $N(\text{Tony})$

b) $\text{KB} \vdash \exists x(A(x) \wedge \neg E(x))$

1.	$E(x) \vee A(x)$	
2.	$\neg A(x) \vee \neg C(x)$	
3.	$N(x) \vee \neg E(x)$	
4.	$\neg C(\text{Mike}) \vee \neg C(\text{Tony})$	
5.	$C(\text{Mike}) \vee C(\text{Tony})$	
6.	$\neg N(\text{Mike}) \vee \neg N(\text{Tony})$	
7.	$N(\text{Mike}) \vee N(\text{Tony})$	
8.	$C(\text{Tony})$	
9.	$N(\text{Tony})$	
10.	$\neg A(x) \vee E(x)$	suposição
11.	$E(x)$	1,10 resolução
12.	$N(x)$	3,11 resolução
13.	$N(\text{Mike})$	12 x/Mike
14.	$\neg N(\text{Tony})$	7,13 resolução
15.	\perp	9,14 \perp_i
16.	$\exists x(A(x) \wedge \neg E(x))$	10-15 \exists_i