

Practica 5: Lógica

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1) $J \rightarrow \neg J \therefore \neg J$

1	$J \rightarrow \neg J$	
2	J	
3	$\neg J$	$\rightarrow E$ 1, 2
4	\perp	$\neg E$ 2, 3
5	$\neg J$	$\neg I$ 2-4

2) $Q \rightarrow (Q \wedge \neg Q) \therefore \neg Q$

1	$Q \rightarrow (Q \wedge \neg Q)$	
2	Q	
3	$(Q \wedge \neg Q)$	$\rightarrow E$ 1, 2
4	$\neg Q$	$\wedge E$ 3
5	\perp	$\neg E$ 2, 4
6	$\neg Q$	$\neg I$ 2-5

 NEW LINE


 NEW SUBPROOF

😊 Congratulations! This proof is correct.

3) $A \rightarrow (B \rightarrow C) \therefore (A \wedge B) \rightarrow C$

1		$A \rightarrow (B \rightarrow C)$	
2			$A \wedge B$
3			A $\wedge E$ 2
4			$B \rightarrow C$ $\rightarrow E$ 1, 3
5			B $\wedge E$ 2
6			C $\rightarrow E$ 4, 5
7		$(A \wedge B) \rightarrow C$	$\rightarrow I$ 2-6

 NEW LINE


 NEW SUBPROOF

😊 Congratulations! This proof is correct.

4) $K \wedge L \therefore K \leftrightarrow L$

1		$K \wedge L$	
2			K
3			L $\wedge E$ 1
4			L
5			K $\wedge E$ 1
6		$K \leftrightarrow L$	$\leftrightarrow I$ 2-3, 4-5

 NEW LINE

 NEW SUBPROOF

😊 Congratulations! This proof is correct.

5) $(C \wedge D) \vee E \therefore E \vee D$

1		$(C \wedge D) \vee E$	
2			
3			
4			
5			
6			
7			

D
 $E \vee D$

E
 $E \vee D$

$E \vee D$


$\wedge E 2$

$\vee I 3$

$\vee I 5$

$\vee E 1, 2-4, 5-6$

 NEW LINE

 NEW SUBPROOF

😊 Congratulations! This proof is correct.