

Fitch argument

Show that

$$\forall x (Tx \rightarrow (Lx \vee Mx))$$

given

$$\neg \exists x (Tx \wedge Sx)$$

and

$$\forall y (Sy \vee My \vee Ly)$$

This is how the argument looks like

1	$\neg \exists x (Tx \wedge Sx)$	
2	$\forall y (Sy \vee My \vee Ly)$	
3	$[a]Ta$	
4	$Sa \vee (Ma \vee La)$	\forall Elim 2
5	Sa	
6	$Ta \wedge Sa$	\wedge Intro 6,7
7	$\exists x (Tx \wedge Sx)$	\exists Intro 6
8	\perp	\perp Intro 1,7
9	$Ma \vee La$	\perp Elim 8
10	$Ma \vee La$	
11	$Ma \vee La$	\vee Elim 4,5-9,10
12	$\forall x (Tx \rightarrow (Mx \vee Lx))$	\forall Intro 3-12