


1	$\vdash p \rightarrow p$	A1	✓	∨	
2	$\vdash [p] p \leftrightarrow (p \rightarrow p)$	A11	✓	∨	
3	$\vdash (p \rightarrow p) \rightarrow [p] p$	EE'	✓	∨	2
4	$\vdash [p] p$	R1	✓	∨	1, 3
5	$\vdash K1 [p] p$	R2	✓	∨	4
6	$\vdash K1 [p] p \rightarrow (p \rightarrow K1 [p] p)$	A1	✓	∨	
7	$\vdash p \rightarrow K1 [p] p$	R1	✓	∨	5, 6
8	$\vdash [p] K1 p \leftrightarrow (p \rightarrow K1 [p] p)$	A14	✓	∨	
9	$\vdash ([p] K1 p \leftrightarrow (p \rightarrow K1 [p] p)) \rightarrow ((p \rightarrow K1 [p] p) \leftrightarrow [p]$	A1	✓	∨	
					
10	$\vdash (p \rightarrow K1 [p] p) \leftrightarrow [p] K1 p$	R1	✓	∨	8, 9
11	$\vdash (p \rightarrow K1 [p] p) \rightarrow [p] K1 p$	EE	✓	∨	10
12	$\vdash [p] K1 p$	R1	✓	∨	7, 11

System PA ∨ Agents (m)

Goal
[p]K1p

Syntax Overview

