1. $\forall x (Fx \to Gx), \exists x (Hx \land Fx) \vdash \exists x (Hx \land Gx)$

1	(1)	$\forall x (Fx \to Gx)$	S
2	(2)	$\exists x (Hx \land Fx)$	S
3	(3)	$Ha \land Fa$	S
1	(4)	$Fa \to Ga$	E∀1
3	(5)	Fa	E∧3
3	(6)	Ha	E∧3
1, 3	(7)	Ga	M. Ponens 4, 5
1, 3	(8)	$Ha \land Ga$	I∧6, 7
1, 3	(9)	$\exists x (Hx \land Gx)$	I∃8
1, 2	(10)	$\exists x (Hx \land Gx)$	E∃2, 3, 9

2. $\forall x (Fx \to Gx) \vdash \exists x \sim Gx \to \exists x \sim Fx$

La conclusión podría expresarse también como
$\exists x (\sim Gx \to \sim Fx)$

1	(1)	$\forall x (Fx \to Gx)$	S
1	(2)	$Fa \to Ga$	E∀1
1	(3)	$\sim Ga \to \sim Fa$	Ley de transposición 2
1	(4)	$\exists x (\sim Gx \to \sim Fx)$	I∃3

$\therefore \exists x (\sim Gx \to \sim Fx) \cong \exists x \sim Gx \to \exists x \sim Fx$

3. $\exists x (Fx \land \sim Gx), \forall x (Fx \to Hx) \vdash \exists x (Hx \land \sim Gx)$

1	(1)	$\exists x (Fx \land \sim Gx)$	S
2	(2)	$\forall x (Fx \to Hx)$	S
3	(3)	$Fa \land \sim Ga$	S
2	(4)	$Fa \to Ha$	E∀2
3	(5)	Fa	E∧3
3	(6)	$\sim Ga$	E∧3
2, 3	(7)	Ha	M. Ponens 4, 5
2, 3	(8)	$Ha \land \sim Ga$	I∧6, 7
2, 3	(9)	$\exists x (Hx \land \sim Gx)$	I∃8
1, 2	(10)	$\exists x (Hx \land \sim Gx)$	E∃1, 3, 9