

t51\_inensp\_1  
(TMbZ8SzMPR8LrEswxB3TMYhgkDvSAMddhQA)

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Let  $v15\_inensp\_1 : \iota \Rightarrow o$  be given. Let  $l2\_inensp\_1 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_inensp\_1 : \iota \Rightarrow \iota$  be given. Let  $u2\_inensp\_1 : \iota \Rightarrow \iota$  be given. Let  $r1\_inensp\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u4\_inensp\_1 : \iota \Rightarrow \iota$  be given. Let  $r3\_inensp\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r2\_inensp\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.((v15\_inensp\_1 X0) \wedge (l2\_inensp\_1 X0)) \Rightarrow (\forall X1.( \\ & \quad m1\_subset\_1 X1 (u1\_inensp\_1 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 ( \\ & \quad u4\_inensp\_1 X0)) \Rightarrow (\neg(r2\_inensp\_1 X0 X1 X2) \wedge (\forall X3.(m1\_subset\_1 \\ & \quad X3 (u2\_inensp\_1 X0)) \Rightarrow (\forall X4.(m1\_subset\_1 X4 (u2\_inensp\_1 X0)) \Rightarrow \\ & \quad (\forall X5.(m1\_subset\_1 X5 (u2\_inensp\_1 X0)) \Rightarrow (\neg(X4 \neq X5) \wedge ((r3\_inensp\_1 \\ & \quad X0 X4 X2) \wedge ((r3\_inensp\_1 X0 X5 X2) \wedge ((\neg r3\_inensp\_1 X0 X3 X2) \wedge ((r1\_inensp\_1 \\ & \quad X0 X1 X3) \wedge ((r1\_inensp\_1 X0 X1 X4) \wedge (r1\_inensp\_1 X0 X1 X5))))))))))))) \\ & \hspace{15em} (1) \end{aligned}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v15\_inensp\_1 X0) \wedge (l2\_inensp\_1 X0)) \Rightarrow (\forall X1.( \\ & \quad m1\_subset\_1 X1 (u1\_inensp\_1 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 ( \\ & \quad u4\_inensp\_1 X0)) \Rightarrow (\exists X3.(m1\_subset\_1 X3 (u2\_inensp\_1 X0)) \wedge \\ & \quad ((\neg r1\_inensp\_1 X0 X1 X3) \wedge (r3\_inensp\_1 X0 X3 X2)))))) \hspace{2em} (2) \end{aligned}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v15\_inensp\_1 X0) \wedge (l2\_inensp\_1 X0)) \Rightarrow (\forall X1.( \\ & \quad m1\_subset\_1 X1 (u1\_inensp\_1 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 ( \\ & \quad u2\_inensp\_1 X0)) \Rightarrow (\neg(\neg r1\_inensp\_1 X0 X1 X2) \wedge (\forall X3.(m1\_subset\_1 \\ & \quad X3 (u4\_inensp\_1 X0)) \Rightarrow (\neg \forall X4.(m1\_subset\_1 X4 (u4\_inensp\_1 \\ & \quad X0)) \Rightarrow (((r2\_inensp\_1 X0 X1 X4) \wedge (r3\_inensp\_1 X0 X2 X4)) \Leftrightarrow (X3 = X4))))))))) \\ & \hspace{15em} (3) \end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v15\_incsp\_1 X0) \wedge (l2\_incsp\_1 X0)) \Rightarrow (\forall X1.( \\
& m1\_subset\_1 X1 (u2\_incsp\_1 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 ( \\
& u2\_incsp\_1 X0)) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (u2\_incsp\_1 X0)) \Rightarrow \\
& (\forall X4.(m1\_subset\_1 X4 (u4\_incsp\_1 X0)) \Rightarrow (((r3\_incsp\_1 X0 \\
& X1 X4) \wedge (r3\_incsp\_1 X0 X2 X4)) \Rightarrow ((r3\_incsp\_1 X0 X3 X4) \vee ((X1 = X2) \vee \\
& (\forall X5.(m1\_subset\_1 X5 (u4\_incsp\_1 X0)) \Rightarrow (\neg(r3\_incsp\_1 X0 \\
& X3 X5) \wedge ((r3\_incsp\_1 X0 X1 X5) \wedge (r3\_incsp\_1 X0 X2 X5))))))))))
\end{aligned} \tag{4}$$

Assume the following.

$$\forall X0. \exists X1. m1\_subset\_1 X1 X0 \tag{5}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0.((v15\_incsp\_1 X0) \wedge (l2\_incsp\_1 X0)) \Rightarrow (\forall X1.( \\
& m1\_subset\_1 X1 (u1\_incsp\_1 X0)) \Rightarrow (\exists X2.(m1\_subset\_1 X2 ( \\
& u2\_incsp\_1 X0)) \wedge (\exists X3.(m1\_subset\_1 X3 (u2\_incsp\_1 X0)) \wedge \\
& (\exists X4.(m1\_subset\_1 X4 (u2\_incsp\_1 X0)) \wedge ((r1\_incsp\_1 X0 \\
& X1 X2) \wedge ((r1\_incsp\_1 X0 X1 X3) \wedge ((r1\_incsp\_1 X0 X1 X4) \wedge (\forall X5. \\
& (m1\_subset\_1 X5 (u4\_incsp\_1 X0)) \Rightarrow (\neg(r3\_incsp\_1 X0 X2 X5) \wedge ((r3\_incsp\_1 \\
& X0 X3 X5) \wedge (r3\_incsp\_1 X0 X4 X5))))))))))
\end{aligned}$$