

t36\_incp\_1 (TM-  
NTGe4rDCQJ2CNAXKSW4x3H7VzPBom7Bns)

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Let  $v15\_incsp\_1 : \iota \Rightarrow o$  be given. Let  $l2\_incsp\_1 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_incsp\_1 : \iota \Rightarrow \iota$  be given. Let  $v3\_incsp\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k8\_domain\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_incsp\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $l1\_incsp\_1 : \iota \Rightarrow o$  be given. Let  $u2\_incsp\_1 : \iota \Rightarrow \iota$  be given. Let  $r4\_incsp\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k7\_domain\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_incsp\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(l1\_incsp\_1 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u2\_incsp\_1 \\ & \quad X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_incsp\_1 X0)) \Rightarrow (\forall X3. \\ & \quad (m1\_subset\_1 X3 (u1\_incsp\_1 X0)) \Rightarrow ((r4\_incsp\_1 X0 (k7\_domain\_1 \\ & \quad (u1\_incsp\_1 X0) X2 X3) X1) \Leftrightarrow ((r1\_incsp\_1 X0 X2 X1) \wedge (r1\_incsp\_1 X0 \\ & \quad X3 X1)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v15\_incsp\_1 X0) \wedge (l2\_incsp\_1 X0)) \Rightarrow (\forall X1.( \\ & \quad m1\_subset\_1 X1 (u1\_incsp\_1 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 ( \\ & \quad u1\_incsp\_1 X0)) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (u1\_incsp\_1 X0)) \Rightarrow \\ & \quad (\forall X4.(m1\_subset\_1 X4 (u2\_incsp\_1 X0)) \Rightarrow (\neg(X1 \neq X2) \wedge ((r4\_incsp\_1 \\ & \quad X0 (k7\_domain\_1 (u1\_incsp\_1 X0) X1 X2) X4) \wedge ((\neg r1\_incsp\_1 X0 X3 X4) \wedge \\ & \quad (v3\_incsp\_1 (k8\_domain\_1 (u1\_incsp\_1 X0) X1 X2 X3) X0))))))))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.(l2\_incsp\_1 X0) \Rightarrow (l1\_incsp\_1 X0) \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((v15\_incsp\_1 X0) \wedge (l2\_incsp\_1 \\ & \quad X0)) \wedge ((m1\_subset\_1 X1 (u1\_incsp\_1 X0)) \wedge (m1\_subset\_1 X2 (u1\_incsp\_1 \\ & \quad X0)))) \Rightarrow (m1\_subset\_1 (k1\_incsp\_1 X0 X1 X2) (u2\_incsp\_1 X0)) \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v15\_incsp\_1 X0) \wedge (l2\_incsp\_1 X0)) \Rightarrow (\forall X1.( \\ & m1\_subset\_1 X1 (u1\_incsp\_1 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 ( \\ & u1\_incsp\_1 X0)) \Rightarrow ((X1 \neq X2) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (u2\_incsp\_1 \\ & X0)) \Rightarrow ((X3 = k1\_incsp\_1 X0 X1 X2) \Leftrightarrow (r4\_incsp\_1 X0 (k7\_domain\_1 (u1\_incsp\_1 \\ & X0) X1 X2) X3)))))) \end{aligned} \tag{5}$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((v15\_incsp\_1 X0) \wedge (l2\_incsp\_1 X0)) \Rightarrow (\forall X1.( \\ & m1\_subset\_1 X1 (u1\_incsp\_1 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 ( \\ & u1\_incsp\_1 X0)) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (u1\_incsp\_1 X0)) \Rightarrow \\ & ((v3\_incsp\_1 (k8\_domain\_1 (u1\_incsp\_1 X0) X1 X2 X3) X0) \Rightarrow ((X1 = X2) \vee \\ & ((X1 = X3) \vee (k1\_incsp\_1 X0 X1 X2 = k1\_incsp\_1 X0 X1 X3)))))) \end{aligned}$$