

t29\_inensp\_1  
(TMJVq56fQxF4fEWuCnqxDt3bmGvpa3WPCph)

October 27, 2020

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  $v3\_inensp\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k8\_domain\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_inensp\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_enumset1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $l1\_inensp\_1 : \iota \Rightarrow o$  be given. Let  $u4\_inensp\_1 : \iota \Rightarrow \iota$  be given. Let  $r5\_inensp\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.k1\_enumset1\ X0\ X1\ X2 = k1\_enumset1\ X0\ X2\ X1 \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((\neg v1\_xboole\_0\ X0) \wedge ((m1\_subset\_1\ X1\ X0) \wedge ((m1\_subset\_1\ X2\ X0) \wedge (m1\_subset\_1\ X3\ X0)))) \Rightarrow (k8\_domain\_1\ X0\ X1\ X2\ X3 = k1\_enumset1\ X1\ X2\ X3) \quad (2)$$

Assume the following.

$$\forall X0.(l1\_inensp\_1\ X0) \Rightarrow (\neg v1\_xboole\_0\ (u1\_inensp\_1\ X0)) \quad (3)$$

Assume the following.

$$\forall X0.(l2\_inensp\_1\ X0) \Rightarrow (l1\_inensp\_1\ X0) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(((v15\_inensp\_1\ X0) \wedge (l2\_inensp\_1\ X0)) \wedge ((m1\_subset\_1\ X1\ (u1\_inensp\_1\ X0)) \wedge ((m1\_subset\_1\ X2\ (u1\_inensp\_1\ X0)) \wedge (m1\_subset\_1\ X3\ (u1\_inensp\_1\ X0)))))) \Rightarrow (m1\_subset\_1\ X0\ X1\ X2\ X3\ (u4\_inensp\_1\ X0)) \quad (5)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v15\_incsp\_1 X0) \wedge (l2\_incsp\_1 X0)) \Rightarrow (\forall X1.( \\
& \quad m1\_subset\_1 X1 (u1\_incsp\_1 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 ( \\
& \quad u1\_incsp\_1 X0)) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (u1\_incsp\_1 X0)) \Rightarrow \\
& \quad ((\neg v3\_incsp\_1 (k8\_domain\_1 (u1\_incsp\_1 X0) X1 X2 X3) X0) \Rightarrow (\forall X4. \\
& \quad (m1\_subset\_1 X4 (u4\_incsp\_1 X0)) \Rightarrow ((X4 = k2\_incsp\_1 X0 X1 X2 X3) \Leftrightarrow \\
& \quad (r5\_incsp\_1 X0 (k8\_domain\_1 (u1\_incsp\_1 X0) X1 X2 X3) X4))))))))) \quad (6)
\end{aligned}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0.((v15\_incsp\_1 X0) \wedge (l2\_incsp\_1 X0)) \Rightarrow (\forall X1.( \\
& \quad m1\_subset\_1 X1 (u1\_incsp\_1 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 ( \\
& \quad u1\_incsp\_1 X0)) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (u1\_incsp\_1 X0)) \Rightarrow \\
& \quad ((\neg v3\_incsp\_1 (k8\_domain\_1 (u1\_incsp\_1 X0) X1 X2 X3) X0) \Rightarrow (k2\_incsp\_1 \\
& \quad X0 X1 X2 X3 = k2\_incsp\_1 X0 X1 X3 X2))))))
\end{aligned}$$