t4_ltlaxio1 (TMTwnHS2Fnmkm7kUVUEmBSntj8pRQtZk3g6)

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Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_hilbert1 : \iota$ be given. Let $k2\_hilbert1 : \iota$ be given. Let $k5\_numbers : \iota$ be given. Let $k1\_hilbert2 : \iota \Rightarrow \iota$ be given. Let $k3\_hilbert1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_hilbert1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_hilbert2 : \iota \Rightarrow o$ be given. Let $v2\_hilbert2 : \iota \Rightarrow o$ be given. Let $v3\_hilbert2 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_hilbert1) \Rightarrow (\neg(\neg v1\_hilbert2\ X0) \wedge ((\neg v2\_hilbert2\ X0) \wedge ((\neg v3\_hilbert2\ X0) \wedge (X0 \neq k2\_hilbert1)))) \tag{1}$$

Assume the following.

$$\forall X0.\exists X1.m1\_subset\_1\ X1\ X0 \tag{2}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_hilbert1) \Rightarrow ((v3\_hilbert2\ X0) \Leftrightarrow (\exists X1.(m1\_subset\_1\ X1\ k5\_numbers) \wedge (X0 = k1\_hilbert2\ X1))) \tag{3}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_hilbert1) \Rightarrow ((v2\_hilbert2\ X0) \Leftrightarrow (\exists X1.(m1\_subset\_1\ X1\ k1\_hilbert1) \wedge (\exists X2.(m1\_subset\_1\ X2\ k1\_hilbert1) \wedge (X0 = k3\_hilbert1\ X1\ X2)))) \tag{4}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_hilbert1) \Rightarrow ((v1\_hilbert2\ X0) \Leftrightarrow (\exists X1.(m1\_subset\_1\ X1\ k1\_hilbert1) \wedge (\exists X2.(m1\_subset\_1\ X2\ k1\_hilbert1) \wedge (X0 = k4\_hilbert1\ X1\ X2)))) \tag{5}$$

Theorem 1

$$\forall X0.(m1\_subset\_1\ X0\ k1\_hilbert1) \Rightarrow (\neg(X0 \neq k2\_hilbert1) \wedge (\forall X1.(m1\_subset\_1\ X1\ k5\_numbers) \Rightarrow ((X0 \neq k1\_hilbert2\ X1) \wedge (\forall X2.(m1\_subset\_1\ X2\ k1\_hilbert1) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ k1\_hilbert1) \Rightarrow ((X0 \neq k3\_hilbert1\ X2\ X3) \wedge (\forall X4.(m1\_subset\_1\ X4\ k1\_hilbert1) \Rightarrow (\forall X5.(m1\_subset\_1\ X5\ k1\_hilbert1) \Rightarrow (X0 \neq k4\_hilbert1\ X4\ X5)))))))))$$