t37_ltlaxio1 (TMRxNL6SuDmGAcxt4cgqedX8fSjRwqNfjkQ)

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Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_hilbert1 : \iota$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $v3\_ltlaxio1 : \iota \Rightarrow o$ be given. Let $v4\_ltlaxio1 : \iota \Rightarrow o$ be given. Let $v5\_ltlaxio1 : \iota \Rightarrow o$ be given. Let $v6\_ltlaxio1 : \iota \Rightarrow o$ be given. Let $v7\_ltlaxio1 : \iota \Rightarrow o$ be given. Let $v8\_ltlaxio1 : \iota \Rightarrow o$ be given. Let $v9\_ltlaxio1 : \iota \Rightarrow o$ be given. Let $r3\_ltlaxio1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5\_numbers : \iota$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10\_ltlaxio1 : \iota$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6\_margrel1 : \iota$ be given. Let $k11\_ltlaxio1 : \iota \Rightarrow \iota$ be given. Let $k1\_domain\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_hilbert1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_hilbert1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_ltlaxio1 : \iota \Rightarrow \iota$ be given. Let $k7\_ltlaxio1 : \iota \Rightarrow \iota$ be given. Let $np\_\_1 : \iota$ be given. Let $k5\_ltlaxio1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_ltlaxio1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6\_ltlaxio1 : \iota \Rightarrow \iota$ be given. Let $k1\_ltlaxio1 : \iota \Rightarrow \iota$ be given. Let $r2\_ltlaxio1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1\_ltlaxio1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_hilbert1) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ k1\_hilbert1) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ k5\_numbers) \Rightarrow (\forall X3.((v1\_funct\_1\ X3) \wedge ((v1\_funct\_2\ X3\ k5\_numbers\ (k1\_zfmisc\_1\ k10\_ltlaxio1)) \wedge (m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ (k1\_zfmisc\_1\ k10\_ltlaxio1)))))) \Rightarrow (k3\_funct\_2\ (k2\_zfmisc\_1\ k5\_numbers\ k1\_hilbert1)\ k6\_margrel1\ (k11\_ltlaxio1\ X3)\ (k1\_domain\_1\ k5\_numbers\ k1\_hilbert1\ X2\ (k3\_hilbert1\ (k4\_hilbert1\ X0\ X1)\ (k2\_ltlaxio1\ (k7\_ltlaxio1\ X1)))) = np\_\_1))))) \tag{1}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_hilbert1)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ k1\_hilbert1)\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ k5\_numbers)\Rightarrow(\forall X3.((v1\_funct\_1\ X3)\wedge((v1\_funct\_2\ X3\ k5\_numbers\ (k1\_zfmisc\_1\ k10\_ltlaxio1))\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ (k1\_zfmisc\_1\ k10\_ltlaxio1))))))\Rightarrow(k3\_funct\_2\ (k2\_zfmisc\_1\ k5\_numbers\ k1\_hilbert1)\ k6\_margrel1\ (k11\_ltlaxio1\ X3)\ (k1\_domain\_1\ k5\_numbers\ k1\_hilbert1\ X2\ (k3\_hilbert1\ (k5\_ltlaxio1\ (k2\_ltlaxio1\ X0)\ (k2\_ltlaxio1\ (k4\_ltlaxio1\ X1\ (k4\_hilbert1\ X1\ X0))))\ (k4\_hilbert1\ X1\ X0)))=np\_\_1)))) \tag{2}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_hilbert1)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ k1\_hilbert1)\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ k5\_numbers)\Rightarrow(\forall X3.((v1\_funct\_1\ X3)\wedge((v1\_funct\_2\ X3\ k5\_numbers\ (k1\_zfmisc\_1\ k10\_ltlaxio1))\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ (k1\_zfmisc\_1\ k10\_ltlaxio1))))))\Rightarrow(k3\_funct\_2\ (k2\_zfmisc\_1\ k5\_numbers\ k1\_hilbert1)\ k6\_margrel1\ (k11\_ltlaxio1\ X3)\ (k1\_domain\_1\ k5\_numbers\ k1\_hilbert1\ X2\ (k3\_hilbert1\ (k4\_hilbert1\ X0\ X1)\ (k5\_ltlaxio1\ (k2\_ltlaxio1\ X1)\ (k2\_ltlaxio1\ (k4\_ltlaxio1\ X0\ (k4\_hilbert1\ X0\ X1))))))=np\_\_1)))) \tag{3}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_hilbert1)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ k5\_numbers)\Rightarrow(\forall X2.((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ k5\_numbers\ (k1\_zfmisc\_1\ k10\_ltlaxio1))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ (k1\_zfmisc\_1\ k10\_ltlaxio1))))))\Rightarrow(k3\_funct\_2\ (k2\_zfmisc\_1\ k5\_numbers\ k1\_hilbert1)\ k6\_margrel1\ (k11\_ltlaxio1\ X2)\ (k1\_domain\_1\ k5\_numbers\ k1\_hilbert1\ X1\ (k3\_hilbert1\ (k6\_ltlaxio1\ X0)\ (k4\_ltlaxio1\ X0\ (k2\_ltlaxio1\ (k6\_ltlaxio1\ X0)))))=np\_\_1))) \tag{4}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_hilbert1)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ k1\_hilbert1)\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ k5\_numbers)\Rightarrow(\forall X3.((v1\_funct\_1\ X3)\wedge((v1\_funct\_2\ X3\ k5\_numbers\ (k1\_zfmisc\_1\ k10\_ltlaxio1))\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ (k1\_zfmisc\_1\ k10\_ltlaxio1))))))\Rightarrow(k3\_funct\_2\ (k2\_zfmisc\_1\ k5\_numbers\ k1\_hilbert1)\ k6\_margrel1\ (k11\_ltlaxio1\ X3)\ (k1\_domain\_1\ k5\_numbers\ k1\_hilbert1\ X2\ (k3\_hilbert1\ (k2\_ltlaxio1\ (k3\_hilbert1\ X0\ X1))\ (k3\_hilbert1\ (k2\_ltlaxio1\ X0)\ (k2\_ltlaxio1\ X1))))=np\_\_1)))) \tag{5}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_hilbert1)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ k5\_numbers)\Rightarrow(\forall X2.((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ k5\_numbers\ (k1\_zfmisc\_1\ k10\_ltlaxio1))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ (k1\_zfmisc\_1\ k10\_ltlaxio1))))))\Rightarrow(k3\_funct\_2\ (k2\_zfmisc\_1\ k5\_numbers\ k1\_hilbert1)\ k6\_margrel1\ (k11\_ltlaxio1\ X2)\ (k1\_domain\_1\ k5\_numbers\ k1\_hilbert1\ X1\ (k3\_hilbert1\ (k2\_ltlaxio1\ (k1\_ltlaxio1\ X0))\ (k1\_ltlaxio1\ (k2\_ltlaxio1\ X0))))=np\_\_1))) \tag{6}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_hilbert1)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ k5\_numbers)\Rightarrow(\forall X2.((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ k5\_numbers\ (k1\_zfmisc\_1\ k10\_ltlaxio1))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ (k1\_zfmisc\_1\ k10\_ltlaxio1))))))\Rightarrow(k3\_funct\_2\ (k2\_zfmisc\_1\ k5\_numbers\ k1\_hilbert1)\ k6\_margrel1\ (k11\_ltlaxio1\ X2)\ (k1\_domain\_1\ k5\_numbers\ k1\_hilbert1\ X1\ (k3\_hilbert1\ (k1\_ltlaxio1\ (k2\_ltlaxio1\ X0))\ (k2\_ltlaxio1\ (k1\_ltlaxio1\ X0))))=np\_\_1))) \tag{7}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_hilbert1)\Rightarrow((v9\_ltlaxio1\ X0)\Leftrightarrow(\exists X1.(m1\_subset\_1\ X1\ k1\_hilbert1)\wedge(\exists X2.(m1\_subset\_1\ X2\ k1\_hilbert1)\wedge(X0=k3\_hilbert1\ (k4\_hilbert1\ X1\ X2)\ (k2\_ltlaxio1\ (k7\_ltlaxio1\ X2))))))) \tag{8}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_hilbert1)\Rightarrow((v8\_ltlaxio1\ X0)\Leftrightarrow(\exists X1.(m1\_subset\_1\ X1\ k1\_hilbert1)\wedge(\exists X2.(m1\_subset\_1\ X2\ k1\_hilbert1)\wedge(X0=k3\_hilbert1\ (k5\_ltlaxio1\ (k2\_ltlaxio1\ X2)\ (k2\_ltlaxio1\ (k4\_ltlaxio1\ X1\ (k4\_hilbert1\ X1\ X2))))\ (k4\_hilbert1\ X1\ X2))))) \tag{9}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_hilbert1)\Rightarrow((v7\_ltlaxio1\ X0)\Leftrightarrow(\exists X1.(m1\_subset\_1\ X1\ k1\_hilbert1)\wedge(\exists X2.(m1\_subset\_1\ X2\ k1\_hilbert1)\wedge(X0=k3\_hilbert1\ (k4\_hilbert1\ X1\ X2)\ (k5\_ltlaxio1\ (k2\_ltlaxio1\ X2)\ (k2\_ltlaxio1\ (k4\_ltlaxio1\ X1\ (k4\_hilbert1\ X1\ X2))))))))) \tag{10}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_hilbert1)\Rightarrow((v6\_ltlaxio1\ X0)\Leftrightarrow(\exists X1.(m1\_subset\_1\ X1\ k1\_hilbert1)\wedge(X0=k3\_hilbert1\ (k6\_ltlaxio1\ X1)\ (k4\_ltlaxio1\ X1\ (k2\_ltlaxio1\ (k6\_ltlaxio1\ X1)))))) \tag{11}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_hilbert1)\Rightarrow((v5\_ltlaxio1\ X0)\Leftrightarrow(\exists X1.(m1\_subset\_1\ X1\ k1\_hilbert1)\wedge(\exists X2.(m1\_subset\_1\ X2\ k1\_hilbert1)\wedge(X0 = k3\_hilbert1\ (k2\_ltlaxio1\ (k3\_hilbert1\ X1\ X2))\ (k3\_hilbert1\ (k2\_ltlaxio1\ X1)\ (k2\_ltlaxio1\ X2))))))) \tag{12}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_hilbert1)\Rightarrow((v4\_ltlaxio1\ X0)\Leftrightarrow(\exists X1.(m1\_subset\_1\ X1\ k1\_hilbert1)\wedge(X0 = k3\_hilbert1\ (k2\_ltlaxio1\ (k1\_ltlaxio1\ X1))\ (k1\_ltlaxio1\ (k2\_ltlaxio1\ X1))))) \tag{13}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_hilbert1)\Rightarrow((v3\_ltlaxio1\ X0)\Leftrightarrow(\exists X1.(m1\_subset\_1\ X1\ k1\_hilbert1)\wedge(X0 = k3\_hilbert1\ (k1\_ltlaxio1\ (k2\_ltlaxio1\ X1))\ (k2\_ltlaxio1\ (k1\_ltlaxio1\ X1))))) \tag{14}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ k1\_hilbert1))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ k1\_hilbert1)\Rightarrow((r3\_ltlaxio1\ X0\ X1)\Leftrightarrow(\forall X2.((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ k5\_numbers\ (k1\_zfmisc\_1\ k10\_ltlaxio1))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ (k1\_zfmisc\_1\ k10\_ltlaxio1))))))\Rightarrow((r2\_ltlaxio1\ X2\ X0)\Rightarrow(r1\_ltlaxio1\ X2\ X1))))) \tag{15}$$

Assume the following.

$$\forall X0.((v1\_funct\_1\ X0)\wedge((v1\_funct\_2\ X0\ k5\_numbers\ (k1\_zfmisc\_1\ k10\_ltlaxio1))\wedge(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ (k1\_zfmisc\_1\ k10\_ltlaxio1))))))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ k1\_hilbert1)\Rightarrow((r1\_ltlaxio1\ X0\ X1)\Leftrightarrow(\forall X2.(m1\_subset\_1\ X2\ k5\_numbers)\Rightarrow(k3\_funct\_2\ (k2\_zfmisc\_1\ k5\_numbers\ k1\_hilbert1)\ k6\_margrel1\ (k11\_ltlaxio1\ X0)\ (k1\_domain\_1\ k5\_numbers\ k1\_hilbert1\ X2\ X1) = np\_\_1)))) \tag{16}$$

Theorem 1

$$\forall X0.(m1\_subset\_1\ X0\ k1\_hilbert1)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ k1\_hilbert1))\Rightarrow((\neg(\neg v3\_ltlaxio1\ X0)\wedge((\neg v4\_ltlaxio1\ X0)\wedge((\neg v5\_ltlaxio1\ X0)\wedge((\neg v6\_ltlaxio1\ X0)\wedge((\neg v7\_ltlaxio1\ X0)\wedge((\neg v8\_ltlaxio1\ X0)\wedge(\neg v9\_ltlaxio1\ X0)))))))\Rightarrow(r3\_ltlaxio1\ X1\ X0)))$$