

t8_rlsb_1

(TMQLffEXAifBysMHB24JAbWF52rvpouugD9)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v13_algstr_0 : \iota \Rightarrow o$ be given. Let $v2_rlvect_1 : \iota \Rightarrow o$ be given. Let $v3_rlvect_1 : \iota \Rightarrow o$ be given. Let $v4_rlvect_1 : \iota \Rightarrow o$ be given. Let $v5_rlvect_1 : \iota \Rightarrow o$ be given. Let $v6_rlvect_1 : \iota \Rightarrow o$ be given. Let $v7_rlvect_1 : \iota \Rightarrow o$ be given. Let $v8_rlvect_1 : \iota \Rightarrow o$ be given. Let $l1_rlvect_1 : \iota \Rightarrow o$ be given. Let $m1_rlsub_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_struct_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $l2_algstr_0 : \iota \Rightarrow o$ be given. Let $l1_algstr_0 : \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $u1_algstr_0 : \iota \Rightarrow \iota$ be given. Let $k1_realset1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_rlvect_1 : \iota \Rightarrow \iota$ be given. Let $k5_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\ & X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\ & ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge (l1_rlvect_1 \\ & X0)))))))))) \Rightarrow (\forall X1. (m1_rlsub_1 X1 X0) \Rightarrow ((\neg v2_struct_0 \\ & X1) \wedge ((v13_algstr_0 X1) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 X1) \wedge \\ & ((v4_rlvect_1 X1) \wedge ((v5_rlvect_1 X1) \wedge ((v6_rlvect_1 X1) \wedge ((v7_rlvect_1 \\ & X1) \wedge ((v8_rlvect_1 X1) \wedge (l1_rlvect_1 X1)))))))))))))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0. (l2_struct_0 X0) \Rightarrow (l1_struct_0 X0) \quad (2)$$

Assume the following.

$$\forall X0. (l2_algstr_0 X0) \Rightarrow ((l2_struct_0 X0) \wedge (l1_algstr_0 X0)) \quad (3)$$

Assume the following.

$$\forall X0. (l1_rlvect_1 X0) \Rightarrow (l2_algstr_0 X0) \quad (4)$$

Assume the following.

$$\forall X0. (l1_struct_0 X0) \Rightarrow (\forall X1. (r1_struct_0 X0 X1) \Leftrightarrow (X1 \in u1_struct_0 X0)) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(r1_tarski\ X0\ X1)\Leftrightarrow(\forall X2.(X2 \in X0)\Rightarrow (X2 \in X1)) \quad (6)$$

Assume the following.

$$\begin{aligned} &\forall X0.((\neg v2_struct_0\ X0)\wedge((v13_algstr_0\ X0)\wedge((v2_rlvect_1 \\ &X0)\wedge((v3_rlvect_1\ X0)\wedge((v4_rlvect_1\ X0)\wedge((v5_rlvect_1\ X0)\wedge \\ &((v6_rlvect_1\ X0)\wedge((v7_rlvect_1\ X0)\wedge((v8_rlvect_1\ X0)\wedge(l1_rlvect_1 \\ &X0))))))))))\Rightarrow(\forall X1.((\neg v2_struct_0\ X1)\wedge((v13_algstr_0 \\ &X1)\wedge((v2_rlvect_1\ X1)\wedge((v3_rlvect_1\ X1)\wedge((v4_rlvect_1\ X1)\wedge \\ &((v5_rlvect_1\ X1)\wedge((v6_rlvect_1\ X1)\wedge((v7_rlvect_1\ X1)\wedge((v8_rlvect_1 \\ &X1)\wedge(l1_rlvect_1\ X1))))))))))\Rightarrow((m1_rlsub_1\ X1\ X0)\Leftrightarrow((r1_tarski \\ &(u1_struct_0\ X1)\ (u1_struct_0\ X0))\wedge((k4_struct_0\ X1 = k4_struct_0 \\ &X0)\wedge((u1_algstr_0\ X1 = k1_realset1\ (u1_algstr_0\ X0)\ (u1_struct_0 \\ &X1))\wedge(u1_rlvect_1\ X1 = k5_relat_1\ (u1_rlvect_1\ X0)\ (k2_zfmisc_1 \\ &k1_numbers\ (u1_struct_0\ X1)))))) \quad (7) \end{aligned}$$

Theorem 1

$$\begin{aligned} &\forall X0.((\neg v2_struct_0\ X0)\wedge((v13_algstr_0\ X0)\wedge((v2_rlvect_1 \\ &X0)\wedge((v3_rlvect_1\ X0)\wedge((v4_rlvect_1\ X0)\wedge((v5_rlvect_1\ X0)\wedge \\ &((v6_rlvect_1\ X0)\wedge((v7_rlvect_1\ X0)\wedge((v8_rlvect_1\ X0)\wedge(l1_rlvect_1 \\ &X0))))))))))\Rightarrow(\forall X1.\forall X2.(m1_rlsub_1\ X2\ X0)\Rightarrow(\forall X3. \\ &(m1_rlsub_1\ X3\ X0)\Rightarrow(((r1_struct_0\ X2\ X1)\wedge(m1_rlsub_1\ X2\ X3))\Rightarrow \\ &(r1_struct_0\ X3\ X1))) \end{aligned}$$