

t29_rlvect_5

(TMT9fC12sChi659PBjub3xvTbT2XVV1tTPP)

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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 $v1_rlvect_5 : \iota \Rightarrow o$ be given. Let $l1_rlvect_1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v1_rlvect_3 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_card_1 : \iota \Rightarrow \iota$ be given. Let $k1_rlvect_5 : \iota \Rightarrow \iota$ be given. Let $k1_rlvect_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_rlsub_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_struct_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l2_algstr_0 : \iota \Rightarrow o$ be given. Let $l2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_algstr_0 : \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $v1_rlvect_1 : \iota \Rightarrow o$ be given. Let $m1_rlvect_3 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $g1_rlvect_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u2_struct_0 : \iota \Rightarrow \iota$ be given. Let $u1_algstr_0 : \iota \Rightarrow \iota$ be given. Let $u1_rlvect_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\
 & ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge (l1_rlvect_1 X0)))))))))) \Rightarrow (\forall X1. (m1_rlsub_1 X1 X0) \Rightarrow (\forall X2. (m1_subset_1 \\
 & X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\forall X3. (m1_subset_1 \\
 & X3 (k1_zfmisc_1 (u1_struct_0 X1))) \Rightarrow ((X2 = X3) \Rightarrow (k1_rlvect_3 X0 \\
 & X2 = k1_rlvect_3 X1 X3))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\
 & ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge (l1_rlvect_1 X0)))))))))) \Rightarrow (\forall X1. (m1_rlsub_1 X1 X0) \Rightarrow (\forall X2. (m1_subset_1 \\
 & X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (((v1_rlvect_3 X2 X0) \wedge (r1_tarski X2 (u1_struct_0 X1))) \Rightarrow ((v1_rlvect_3 X2 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\
 & (u1_struct_0 X1))))))
 \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v2_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge \\ & ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge ((v5_rlvect_1 \\ & X1) \wedge ((v6_rlvect_1 X1) \wedge ((v7_rlvect_1 X1) \wedge ((v8_rlvect_1 X1) \wedge \\ & (l1_rlvect_1 X1)))))))))) \Rightarrow (\forall X2. (m1_subset_1 X2 (k1_zfmisc_1 \\ & (u1_struct_0 X1))) \Rightarrow ((X0 \in X2) \Rightarrow (r1_struct_0 (k1_rlvect_3 X1 X2) \\ & X0))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\ & X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\ & ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge (l1_rlvect_1 \\ & X0)))))))))) \Rightarrow (\forall X1. (m1_rlsub_1 X1 X0) \Rightarrow ((\neg v2_struct_0 \\ & X1) \wedge ((v13_algstr_0 X1) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 X1) \wedge \\ & ((v4_rlvect_1 X1) \wedge ((v5_rlvect_1 X1) \wedge ((v6_rlvect_1 X1) \wedge ((v7_rlvect_1 \\ & X1) \wedge ((v8_rlvect_1 X1) \wedge (l1_rlvect_1 X1)))))))))) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0. (l2_algstr_0 X0) \Rightarrow ((l2_struct_0 X0) \wedge (l1_algstr_0 X0)) \quad (5)$$

Assume the following.

$$\forall X0. (l1_rlvect_1 X0) \Rightarrow (l2_algstr_0 X0) \quad (6)$$

Assume the following.

$$\forall X0. (l1_algstr_0 X0) \Rightarrow (l1_struct_0 X0) \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\ & X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\ & ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge (l1_rlvect_1 \\ & X0)))))))))) \Rightarrow (m2_subset_1 (k1_rlvect_5 X0) k1_numbers k5_numbers) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge \\ & ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 \\ & X0) \wedge ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge \\ & (l1_rlvect_1 X0)))))))))) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\ & X0))) \Rightarrow ((v1_rlvect_1 (k1_rlvect_3 X0 X1)) \wedge (m1_rlsub_1 (k1_rlvect_3 \\ & X0 X1) X0)) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0. (l1_struct_0 X0) \Rightarrow (\forall X1. (r1_struct_0 X0 X1) \Leftrightarrow (X1 \in u1_struct_0 X0)) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.(r1_tarski\ X0\ X1)\Leftrightarrow(\forall X2.(X2 \in X0)\Rightarrow (X2 \in X1)) \quad (11)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0\ X0)\wedge((v13_algstr_0\ X0)\wedge((v2_rlvect_1 \\ X0)\wedge((v3_rlvect_1\ X0)\wedge((v4_rlvect_1\ X0)\wedge((v5_rlvect_1\ X0)\wedge \\ ((v6_rlvect_1\ X0)\wedge((v7_rlvect_1\ X0)\wedge((v8_rlvect_1\ X0)\wedge(l1_rlvect_1 \\ X0))))))))))\Rightarrow(\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1\ (u1_struct_0 \\ X0)))\Rightarrow((m1_rlvect_3\ X1\ X0)\Leftrightarrow((v1_rlvect_3\ X1\ X0)\wedge(k1_rlvect_3 \\ X0\ X1 = g1_rlvect_1\ (u1_struct_0\ X0)\ (u2_struct_0\ X0)\ (u1_algstr_0 \\ X0)\ (u1_rlvect_1\ X0)))))) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0\ X0)\wedge((v13_algstr_0\ X0)\wedge((v2_rlvect_1 \\ X0)\wedge((v3_rlvect_1\ X0)\wedge((v4_rlvect_1\ X0)\wedge((v5_rlvect_1\ X0)\wedge \\ ((v6_rlvect_1\ X0)\wedge((v7_rlvect_1\ X0)\wedge((v8_rlvect_1\ X0)\wedge(l1_rlvect_1 \\ X0))))))))))\Rightarrow((v1_rlvect_5\ X0)\Rightarrow(\forall X1.(m2_subset_1\ X1 \\ k1_numbers\ k5_numbers)\Rightarrow((X1 = k1_rlvect_5\ X0)\Leftrightarrow(\forall X2.(m1_rlvect_3 \\ X2\ X0)\Rightarrow(X1 = k1_card_1\ X2)))))) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0\ X0)\wedge((v13_algstr_0\ X0)\wedge((v2_rlvect_1 \\ X0)\wedge((v3_rlvect_1\ X0)\wedge((v4_rlvect_1\ X0)\wedge((v5_rlvect_1\ X0)\wedge \\ ((v6_rlvect_1\ X0)\wedge((v7_rlvect_1\ X0)\wedge((v8_rlvect_1\ X0)\wedge((v1_rlvect_5 \\ X0)\wedge(l1_rlvect_1\ X0))))))))))\Rightarrow(\forall X1.(m1_rlsub_1\ X1\ X0)\Rightarrow \\ (v1_rlvect_5\ X1)) \end{aligned} \quad (14)$$

Assume the following.

$$\forall X0.(l1_rlvect_1\ X0)\Rightarrow((v1_rlvect_1\ X0)\Rightarrow(X0 = g1_rlvect_1 \\ (u1_struct_0\ X0)\ (u2_struct_0\ X0)\ (u1_algstr_0\ X0)\ (u1_rlvect_1 \\ X0))) \quad (15)$$

Theorem 1

$$\begin{aligned} \forall X0.((\neg v2_struct_0\ X0)\wedge((v13_algstr_0\ X0)\wedge((v2_rlvect_1 \\ X0)\wedge((v3_rlvect_1\ X0)\wedge((v4_rlvect_1\ X0)\wedge((v5_rlvect_1\ X0)\wedge \\ ((v6_rlvect_1\ X0)\wedge((v7_rlvect_1\ X0)\wedge((v8_rlvect_1\ X0)\wedge((v1_rlvect_5 \\ X0)\wedge(l1_rlvect_1\ X0))))))))))\Rightarrow(\forall X1.(m1_subset_1\ X1 \\ (k1_zfmisc_1\ (u1_struct_0\ X0)))\Rightarrow((v1_rlvect_3\ X1\ X0)\Rightarrow(k1_card_1 \\ X1 = k1_rlvect_5\ (k1_rlvect_3\ X0\ X1)))))) \end{aligned}$$