

t46_rlaffin1 (TM-
PabXT1H9aPonM1k5CbS8ADecBYmTWygnx)

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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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $v1_rlaffin1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_rlvect_3 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l2_algstr_0 : \iota \Rightarrow o$ be given. Let $k5_rusub_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_rlvect_1 X0) \wedge ((v4_rlvect_1 \\ X0) \wedge (l2_algstr_0 X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 \\ (u1_struct_0 X0))) \Rightarrow (k5_rusub_4 X0 X1 (k4_struct_0 X0) = X1)) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.(((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\ X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\ ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge (l1_rlvect_1 \\ X0)))))))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\ X0))) \Rightarrow ((v1_rlaffin1 X1 X0) \Leftrightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 \\ X0)) \Rightarrow ((X2 \in X1) \Rightarrow (v1_rlvect_3 (k7_subset_1 (u1_struct_0 X0) (k5_rusub_4 \\ X0 X1 (k4_algstr_0 X0 X2)) (k6_domain_1 (u1_struct_0 X0) (k4_struct_0 \\ X0))) X0)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.(((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v3_rlvect_1 \\ X0) \wedge ((v4_rlvect_1 X0) \wedge (l2_algstr_0 X0)))))) \Rightarrow (k4_algstr_0 X0 \\ (k4_struct_0 X0) = k4_struct_0 X0) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X1 (k1_zfmisc_1 X0))\Rightarrow(k7_subset_1 X0 X1 X2 = k4_xboole_0 X1 X2) \quad (5)$$

Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge((v13_algstr_0 X0)\wedge((v2_rlvect_1 \\ & X0)\wedge((v3_rlvect_1 X0)\wedge((v4_rlvect_1 X0)\wedge((v5_rlvect_1 X0)\wedge \\ & ((v6_rlvect_1 X0)\wedge((v7_rlvect_1 X0)\wedge((v8_rlvect_1 X0)\wedge(l1_rlvect_1 \\ & X0))))))))))\Rightarrow(\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\ & X0)))\Rightarrow((v1_rlaffin1 X1 X0)\Leftrightarrow(\neg(\neg v1_xboole_0 X1)\wedge(\forall X2. \\ & (m1_subset_1 X2 (u1_struct_0 X0))\Rightarrow(\neg(X2 \in X1)\wedge(v1_rlvect_3 (k7_subset_1 \\ & (u1_struct_0 X0) (k5_rusub_4 X0 X1 (k4_algstr_0 X0 X2)) (k6_domain_1 \\ & (u1_struct_0 X0) (k4_struct_0 X0))) X0)))))) \quad (7) \end{aligned}$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge((v13_algstr_0 X0)\wedge((v2_rlvect_1 \\ & X0)\wedge((v3_rlvect_1 X0)\wedge((v4_rlvect_1 X0)\wedge((v5_rlvect_1 X0)\wedge \\ & ((v6_rlvect_1 X0)\wedge((v7_rlvect_1 X0)\wedge((v8_rlvect_1 X0)\wedge(l1_rlvect_1 \\ & X0))))))))))\Rightarrow(\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\ & X0)))\Rightarrow((k4_struct_0 X0 \in X1)\Rightarrow((v1_rlaffin1 X1 X0)\Leftrightarrow(v1_rlvect_3 \\ & (k7_subset_1 (u1_struct_0 X0) X1 (k6_domain_1 (u1_struct_0 X0) \\ & (k4_struct_0 X0))) X0)))) \end{aligned}$$