

t25_rlvect_5

(TMXfsAdo33uTWNjUJ7gpxZsCSvAv7438GJ8)

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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 $v1_rlvect_5 : \iota \Rightarrow o$ be given. Let $m1_rlvect_3 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_card_1 : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ 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. Let $k1_rlvect_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_rlvect_3 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_card_1 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $v2_membered : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (v13_algstr_0 X0) \wedge (v2_rlvect_1 X0) \wedge (v3_rlvect_1 X0) \wedge (v4_rlvect_1 X0) \wedge (v5_rlvect_1 X0) \wedge \\ & ((v6_rlvect_1 X0) \wedge (v7_rlvect_1 X0) \wedge (v8_rlvect_1 X0) \wedge (l1_rlvect_1 X0)))))) \Rightarrow ((v1_rlvect_5 X0) \Rightarrow (\forall X1. (m1_rlvect_3 X1 X0) \Rightarrow (v1_finset_1 X1))) \quad (3) \end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\
& X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\
& ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge (l1_rlvect_1 \\
& X0)))))))))) \Rightarrow (\forall X1.((v1_finset_1 X1) \wedge (m1_subset_1 X1 \\
& (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow (\forall X2.((v1_finset_1 \\
& X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow (((g1_rlvect_1 \\
& (u1_struct_0 X0) (u2_struct_0 X0) (u1_algstr_0 X0) (u1_rlvect_1 \\
& X0) = k1_rlvect_3 X0 X1) \wedge (v1_rlvect_3 X2 X0)) \Rightarrow ((r1_xxreal_0 (k5_card_1 \\
& X2) (k5_card_1 X1)) \wedge (\exists X3.((v1_finset_1 X3) \wedge (m1_subset_1 \\
& X3 (k1_zfmisc_1 (u1_struct_0 X0)))) \wedge ((r1_tarski X3 X1) \wedge ((k5_card_1 \\
& X3 = k6_xcmplx_0 (k5_card_1 X1) (k5_card_1 X2)) \wedge (g1_rlvect_1 (\\
& u1_struct_0 X0) (u2_struct_0 X0) (u1_algstr_0 X0) (u1_rlvect_1 \\
& X0) = k1_rlvect_3 X0 (k4_subset_1 (u1_struct_0 X0) X2 X3))))))))))
\end{aligned} \tag{4}$$

Assume the following.

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow ((r1_xxreal_0 X0 X1) \wedge (r1_xxreal_0 X1 X0)) \Rightarrow (X0 = X1)) \tag{5}$$

Assume the following.

$$k5_numbers = k4_ordinal1 \tag{6}$$

Assume the following.

$$\forall X0.(v1_finset_1 X0) \Rightarrow (k5_card_1 X0 = k1_card_1 X0) \tag{7}$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1) \wedge (v3_ordinal1 k4_ordinal1) \tag{8}$$

Assume the following.

$$v3_membered k1_numbers \tag{9}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\
& X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\
& ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge (l1_rlvect_1 \\
& X0)))))))))) \Rightarrow (\forall X1.(m1_rlvect_3 X1 X0) \Rightarrow (m1_subset_1 X1 \\
& (k1_zfmisc_1 (u1_struct_0 X0))))
\end{aligned} \tag{10}$$

Assume the following.

$$m1_subset_1 k5_numbers (k1_zfmisc_1 k1_numbers) \tag{11}$$

Assume the following.

$$\forall X0.(v1_finset_1 X0) \Rightarrow (m1_subset_1 (k5_card_1 X0) k4_ordinal1) \quad (12)$$

Assume the following.

$$\begin{aligned} \forall X0. (& \neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\ & X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\ & ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge (l1_rlvect_1 \\ & X0)))))))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\ & X0))) \Rightarrow ((m1_rlvect_3 X1 X0) \Leftrightarrow ((v1_rlvect_3 X1 X0) \wedge (k1_rlvect_3 \\ & X0 X1 = g1_rlvect_1 (u1_struct_0 X0) (u2_struct_0 X0) (u1_algstr_0 \\ & X0) (u1_rlvect_1 X0)))))) \end{aligned} \quad (13)$$

Assume the following.

$$\forall X0.(v3_membered X0) \Rightarrow (v2_membered X0) \quad (14)$$

Assume the following.

$$\forall X0.(v2_membered X0) \Rightarrow (\forall X1.(m1_subset_1 X1 X0) \Rightarrow (v1_xreal_0 X1)) \quad (15)$$

Theorem 1

$$\begin{aligned} \forall X0. (& \neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\ & X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\ & ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge (l1_rlvect_1 \\ & X0)))))))))) \Rightarrow ((v1_rlvect_5 X0) \Rightarrow (\forall X1.(m1_rlvect_3 X1 \\ & X0) \Rightarrow (\forall X2.(m1_rlvect_3 X2 X0) \Rightarrow (k1_card_1 X1 = k1_card_1 \\ & X2)))) \end{aligned}$$