

t36_rlvect_2

(TMZfZ6VLXRgctGGzm9r78Vr3L79XozaE2ma)

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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 $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $m1_rlvect_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_rlvect_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_rlvect_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_rlvect_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_rlvect_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $m2_rlvect_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l2_struct_0 : \iota \Rightarrow o$ be given. Let $k9_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l2_algstr_0 : \iota \Rightarrow o$ be given. Let $l1_algstr_0 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\ & X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\ & ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge (l1_rlvect_1 \\ & X0)))))))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow \\ & (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow ((X1 \neq X2) \Rightarrow (\forall X3. \\ & (m2_rlvect_2 X3 X0 (k7_domain_1 (u1_struct_0 X0) X1 X2)) \Rightarrow (k6_rlvect_2 \\ & X0 X3 = k3_rlvect_1 X0 (k1_rlvect_1 X0 X1 (k3_funct_2 (u1_struct_0 \\ & X0) k1_numbers X3 X1)) (k1_rlvect_1 X0 X2 (k3_funct_2 (u1_struct_0 \\ & X0) k1_numbers X3 X2)))))))))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. r1_tarski X0 X0 \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((\neg v1_xboole_0 X1) \wedge (m1_funct_2 X2 X0 X1)) \Rightarrow (\forall X3. (m2_funct_2 X3 X0 X1 X2) \Leftrightarrow (m1_subset_1 X3 X2)) \tag{3}$$

Assume the following.

$$\neg v1_xboole_0 \ k1_numbers \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 \ X0) \wedge (l2_struct_0 \ X0)) \Rightarrow (\forall X1. \\ & (m1_rlvect_2 \ X1 \ X0) \Rightarrow (m2_funct_2 \ X1 \ (u1_struct_0 \ X0) \ k1_numbers \\ & (k9_funct_2 \ (u1_struct_0 \ X0) \ k1_numbers))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.(l2_algstr_0 \ X0) \Rightarrow ((l2_struct_0 \ X0) \wedge (l1_algstr_0 \ X0)) \quad (6)$$

Assume the following.

$$\forall X0.(l1_rlvect_1 \ X0) \Rightarrow (l2_algstr_0 \ X0) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(\neg v1_xboole_0 \ X1) \Rightarrow (m1_funct_2 \ (k9_funct_2 \ X0 \ X1) \ X0 \ X1) \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(((\neg v2_struct_0 \ X0) \wedge (l2_algstr_0 \ X0)) \wedge \\ & (m1_subset_1 \ X1 \ (k9_funct_2 \ (u1_struct_0 \ X0) \ k1_numbers))) \Rightarrow (\\ & m1_subset_1 \ (k3_rlvect_2 \ X0 \ X1) \ (k1_zfmisc_1 \ (u1_struct_0 \ X0))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 \ X0) \wedge (l2_algstr_0 \ X0)) \Rightarrow (\forall X1. \\ & (m1_subset_1 \ X1 \ (k1_zfmisc_1 \ (u1_struct_0 \ X0))) \Rightarrow (\forall X2. \\ & (m1_rlvect_2 \ X2 \ X0) \Rightarrow ((m2_rlvect_2 \ X2 \ X0 \ X1) \Leftrightarrow (r1_tarski \ (k3_rlvect_2 \\ & X0 \ X2) \ X1)))) \end{aligned} \quad (10)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 \ X0) \wedge ((v13_algstr_0 \ X0) \wedge ((v2_rlvect_1 \\ & X0) \wedge ((v3_rlvect_1 \ X0) \wedge ((v4_rlvect_1 \ X0) \wedge ((v5_rlvect_1 \ X0) \wedge \\ & ((v6_rlvect_1 \ X0) \wedge ((v7_rlvect_1 \ X0) \wedge ((v8_rlvect_1 \ X0) \wedge (l1_rlvect_1 \\ & X0)))))))))) \Rightarrow (\forall X1.(m1_subset_1 \ X1 \ (u1_struct_0 \ X0)) \Rightarrow \\ & (\forall X2.(m1_subset_1 \ X2 \ (u1_struct_0 \ X0)) \Rightarrow (\forall X3.(m1_rlvect_2 \\ & X3 \ X0) \Rightarrow ((k3_rlvect_2 \ X0 \ X3 = k7_domain_1 \ (u1_struct_0 \ X0) \ X1 \ X2) \Rightarrow \\ & ((X1 = X2) \vee (k6_rlvect_2 \ X0 \ X3 = k3_rlvect_1 \ X0 \ (k1_rlvect_1 \ X0 \ X1 \\ & (k3_funct_2 \ (u1_struct_0 \ X0) \ k1_numbers \ X3 \ X1)) \ (k1_rlvect_1 \ X0 \\ & X2 \ (k3_funct_2 \ (u1_struct_0 \ X0) \ k1_numbers \ X3 \ X2)))))))))) \end{aligned}$$