

t20_rlvect_4

(TMap3qtuDboZ6KTQaRFNngmwRZ3gqgn2hNjy)

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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 $v1_rlvect_3 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k1_numbers : \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k1_rlvect_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_real_1 : \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $np_0 : \iota$ be given. Let $k4_xcmplx_0 : \iota \Rightarrow \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $v3_xxreal_0 : \iota \Rightarrow o$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.((\neg v2_struct_0 \\ & X1) \wedge ((v13_algstr_0 X1) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 X1) \wedge \\ & ((v4_rlvect_1 X1) \wedge ((v5_rlvect_1 X1) \wedge ((v6_rlvect_1 X1) \wedge ((v7_rlvect_1 \\ & X1) \wedge ((v8_rlvect_1 X1) \wedge (l1_rlvect_1 X1)))))))))) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 (u1_struct_0 X1)) \Rightarrow (\forall X3.(m1_subset_1 X3 \\ & (u1_struct_0 X1)) \Rightarrow ((v1_rlvect_3 (k7_domain_1 (u1_struct_0 X1) \\ & X2 X3) X1) \Rightarrow ((X2 = X3) \vee ((X0 = k6_numbers) \vee (v1_rlvect_3 (k7_domain_1 \\ & (u1_struct_0 X1) X2 (k1_rlvect_1 X1 X3 X0)) X1)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\ & X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\ & ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge (l1_rlvect_1 \\ & X0)))))))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow \\ & (k4_algstr_0 X0 X1 = k1_rlvect_1 X0 X1 (k1_real_1 np_1))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 \ np_1) \wedge (m2_subset_1 \ np_1 \ k1_numbers \ k5_numbers)) \wedge \\ & ((m1_subset_1 \ np_1 \ k5_numbers) \wedge (m1_subset_1 \ np_1 \ k1_numbers)) \end{aligned} \quad (4)$$

Assume the following.

$$v1_xboole_0 \ np_0 \quad (5)$$

Assume the following.

$$k4_xcmplx_0 \ (k4_xcmplx_0 \ np_1) = np_1 \quad (6)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (7)$$

Assume the following.

$$\forall X0.(m1_subset_1 \ X0 \ k1_numbers) \Rightarrow (k1_real_1 \ X0 = k4_xcmplx_0 \ X0) \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_xreal_0 \ X0) \Rightarrow & ((v1_xcmplx_0 \ (k4_xcmplx_0 \ X0)) \wedge \\ & (v1_xreal_0 \ (k4_xcmplx_0 \ X0))) \end{aligned} \quad (9)$$

Assume the following.

$$v3_membered \ k1_numbers \quad (10)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v3_xxreal_0 \ X0) \wedge (v1_xreal_0 \ X0)) \Rightarrow & ((v1_xcmplx_0 \\ & (k4_xcmplx_0 \ X0)) \wedge (\neg v2_xxreal_0 \ (k4_xcmplx_0 \ X0))) \end{aligned} \quad (11)$$

Assume the following.

$$\forall X0.(m1_subset_1 \ X0 \ k1_numbers) \Rightarrow (m1_subset_1 \ (k1_real_1 \ X0) \ k1_numbers) \quad (12)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_xxreal_0 \ X0) \wedge (v3_xxreal_0 \ X0)) \Rightarrow & ((\neg v1_xboole_0 \\ & X0) \wedge ((v1_xxreal_0 \ X0) \wedge (\neg v2_xxreal_0 \ X0))) \end{aligned} \quad (13)$$

Assume the following.

$$\forall X0.(v1_xreal_0 \ X0) \Rightarrow (v1_xxreal_0 \ X0) \quad (14)$$

Assume the following.

$$\begin{aligned} \forall X0.(v3_membered \ X0) \Rightarrow & (\forall X1.(m1_subset_1 \ X1 \ X0) \Rightarrow \\ & (v1_xreal_0 \ X1)) \end{aligned} \quad (15)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (v13_algstr_0 X0) \wedge (v2_rlvect_1 \\ & X0) \wedge (v3_rlvect_1 X0) \wedge (v4_rlvect_1 X0) \wedge (v5_rlvect_1 X0) \wedge \\ & ((v6_rlvect_1 X0) \wedge (v7_rlvect_1 X0) \wedge (v8_rlvect_1 X0) \wedge (l1_rlvect_1 \\ & X0)))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow \\ & (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow ((v1_rlvect_3 \\ & (k7_domain_1 (u1_struct_0 X0) X1 X2) X0) \Rightarrow ((X1 = X2) \vee (v1_rlvect_3 \\ & (k7_domain_1 (u1_struct_0 X0) X1 (k4_algstr_0 X0 X2)) X0)))))) \end{aligned}$$