

t8_rusub_4

(TMZsHWX6bnmRwuwJMmmC2v6WrdCFErTBf74)

October 27, 2020

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 $v2_bhsp_1 : \iota \Rightarrow o$ be given. Let $v1_rusub_4 : \iota \Rightarrow o$ be given. Let $l1_bhsp_1 : \iota \Rightarrow o$ be given. Let $m1_rusub_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_rusub_4 : \iota \Rightarrow \iota$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ 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 $g1_bhsp_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $u1_bhsp_1 : \iota \Rightarrow \iota$ be given. Let $k1_rusub_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_rlvect_3 : \iota \Rightarrow \iota \Rightarrow o$ 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 $k1_card_1 : \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $m1_rusub_3 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\
 & X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\
 & ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge ((v2_bhsp_1 \\
 & X0) \wedge (l1_bhsp_1 X0)))))))))) \Rightarrow (\forall X1. ((v1_finset_1 X1) \wedge \\
 & (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow (\forall X2. \\
 & ((v1_finset_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 \\
 & X0)))) \Rightarrow (((g1_bhsp_1 (u1_struct_0 X0) (u2_struct_0 X0) (u1_algstr_0 \\
 & X0) (u1_rlvect_1 X0) (u1_bhsp_1 X0) = k1_rusub_3 X0 X1) \wedge (v1_rlvect_3 \\
 & X2 X0)) \Rightarrow ((r1_xxreal_0 (k5_card_1 X2) (k5_card_1 X1)) \wedge (\exists X3. \\
 & ((v1_finset_1 X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (u1_struct_0 \\
 & X0)))) \wedge ((r1_tarski X3 X1) \wedge ((k5_card_1 X3 = k6_xcmplx_0 (k5_card_1 \\
 & X1) (k5_card_1 X2)) \wedge (g1_bhsp_1 (u1_struct_0 X0) (u2_struct_0 \\
 & X0) (u1_algstr_0 X0) (u1_rlvect_1 X0) (u1_bhsp_1 X0) = k1_rusub_3 \\
 & X0 (k4_subset_1 (u1_struct_0 X0) X2 X3))))))))))
 \end{aligned}
 \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\ & X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\ & ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge ((v2_bhsp_1 \\ & X0) \wedge (l1_bhsp_1 X0)))))))))) \Rightarrow (\forall X1.(m1_rusub_1 X1 X0) \Rightarrow \\ & (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X1))) \Rightarrow \\ & ((v1_rlvect_3 X2 X1) \Rightarrow ((v1_rlvect_3 X2 X0) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\ & (u1_struct_0 X0))))))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.(v1_finset_1 X0) \Rightarrow (k5_card_1 X0 = k1_card_1 X0) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\ & X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\ & ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge ((v2_bhsp_1 \\ & X0) \wedge (l1_bhsp_1 X0)))))))))) \Rightarrow (\forall X1.(m1_rusub_1 X1 X0) \Rightarrow \\ & ((\neg v2_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge ((v2_rlvect_1 X1) \wedge ((\\ & v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge ((v5_rlvect_1 X1) \wedge ((v6_rlvect_1 \\ & X1) \wedge ((v7_rlvect_1 X1) \wedge ((v8_rlvect_1 X1) \wedge ((v2_bhsp_1 X1) \wedge (l1_bhsp_1 \\ & X1))))))))))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\ & X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\ & ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge ((v2_bhsp_1 \\ & X0) \wedge (l1_bhsp_1 X0)))))))))) \Rightarrow (m1_subset_1 (k1_rusub_4 X0) k5_numbers) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\ & X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\ & ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge ((v2_bhsp_1 \\ & X0) \wedge (l1_bhsp_1 X0)))))))))) \Rightarrow ((v1_rusub_4 X0) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 k5_numbers) \Rightarrow ((X1 = k1_rusub_4 X0) \Leftrightarrow (\forall X2. \\ & (m1_rusub_3 X2 X0) \Rightarrow (X1 = k1_card_1 X2)))))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\ & X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\ & ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge ((v2_bhsp_1 \\ & X0) \wedge (l1_bhsp_1 X0)))))))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 \\ & (u1_struct_0 X0))) \Rightarrow ((m1_rusub_3 X1 X0) \Leftrightarrow ((v1_rlvect_3 X1 X0) \wedge \\ & (k1_rusub_3 X0 X1 = g1_bhsp_1 (u1_struct_0 X0) (u2_struct_0 X0) \\ & (u1_algstr_0 X0) (u1_rlvect_1 X0) (u1_bhsp_1 X0)))))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned}
& \forall X0. ((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\
& X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\
& ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge ((v2_bhsp_1 \\
& X0) \wedge (l1_bhsp_1 X0)))))))))) \Rightarrow ((v1_rusub_4 X0) \Leftrightarrow (\exists X1. \\
& ((v1_finset_1 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\
& X0)))) \wedge (m1_rusub_3 X1 X0)))
\end{aligned} \tag{8}$$

Assume the following.

$$\begin{aligned}
& \forall X0. ((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\
& X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\
& ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge ((v2_bhsp_1 \\
& X0) \wedge ((v1_rusub_4 X0) \wedge (l1_bhsp_1 X0)))))))))) \Rightarrow (\forall X1. \\
& (m1_rusub_1 X1 X0) \Rightarrow (v1_rusub_4 X1))
\end{aligned} \tag{9}$$

Theorem 1

$$\begin{aligned}
& \forall X0. ((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\
& X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\
& ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge ((v2_bhsp_1 \\
& X0) \wedge ((v1_rusub_4 X0) \wedge (l1_bhsp_1 X0)))))))))) \Rightarrow (\forall X1. \\
& (m1_rusub_1 X1 X0) \Rightarrow (r1_xxreal_0 (k1_rusub_4 X1) (k1_rusub_4 X0)))
\end{aligned}$$