

t18_rusub_4
(TMF456FbDsKoSMRP8aiKcunPyGtqK1ZLdSP)

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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 $v2_bhsp_1 : \iota \Rightarrow o$ 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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_rusub_4 : \iota \Rightarrow \iota$ be given. Let $v1_bhsp_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\ & X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\ & ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge ((v2_bhsp_1 \\ & X0) \wedge ((v1_rusub_4 X0) \wedge (l1_bhsp_1 X0)))))))))) \Rightarrow (\forall X1. \\ & (m1_rusub_1 X1 X0) \Rightarrow (r1_xxreal_0 (k1_rusub_4 X1) (k1_rusub_4 X0))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\ & X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\ & ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge ((v2_bhsp_1 \\ & X0) \wedge ((v1_rusub_4 X0) \wedge (l1_bhsp_1 X0)))))))))) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 k5_numbers) \Rightarrow (\neg (r1_xxreal_0 X1 (k1_rusub_4 X0)) \wedge \\ & (\forall X2. ((v1_bhsp_1 X2) \wedge (m1_rusub_1 X2 X0) \Rightarrow (k1_rusub_4 \\ & X2 \neq X1)))))) \end{aligned} \tag{2}$$

Theorem 1

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\ & X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\ & ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge ((v2_bhsp_1 \\ & X0) \wedge ((v1_rusub_4 X0) \wedge (l1_bhsp_1 X0)))))))))) \Rightarrow (\forall X1. \\ & (m1_rusub_1 X1 X0) \Rightarrow (\forall X2. (m1_subset_1 X2 k5_numbers) \Rightarrow (\\ & (r1_xxreal_0 X2 (k1_rusub_4 X0)) \Leftrightarrow (\exists X3. ((v1_bhsp_1 X3) \wedge \\ & (m1_rusub_1 X3 X0)) \wedge (k1_rusub_4 X3 = X2)))))) \end{aligned}$$