

t10_rusub_4 (TM- NEVrVEF5gYiY9rYxubqJdYHZ8KU9Pejbr)

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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 $k1_rusub.4 : \iota \Rightarrow \iota$ be given. Let $k2_rusub.1 : \iota \Rightarrow \iota$ be given. Let $m1_subset.1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc.1 : \iota \Rightarrow \iota$ be given. Let $u1_struct.0 : \iota \Rightarrow \iota$ be given. Let $v1_rlvect.3 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_card.1 : \iota \Rightarrow \iota$ be given. Let $k1_rusub.3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_rusub.3 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $g1_bhsp.1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $v1_finset.1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct.0 X0) \wedge ((v13_algstr.0 X0) \wedge ((v2_rlvect.1 \\ & X0) \wedge ((v3_rlvect.1 X0) \wedge ((v4_rlvect.1 X0) \wedge ((v5_rlvect.1 X0) \wedge \\ & ((v6_rlvect.1 X0) \wedge ((v7_rlvect.1 X0) \wedge ((v8_rlvect.1 X0) \wedge ((v2_bhsp.1 \\ & X0) \wedge ((v1_rusub.4 X0) \wedge (l1_bhsp.1 X0)))))))))) \Rightarrow (\forall X1. \\ & (m1_subset.1 X1 (k1_zfmisc.1 (u1_struct.0 X0))) \Rightarrow ((v1_rlvect.3 \\ & X1 X0) \Rightarrow (k1_card.1 X1 = k1_rusub.4 (k1_rusub.3 X0 X1)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct.0 X0) \wedge ((v13_algstr.0 X0) \wedge ((v2_rlvect.1 \\ & X0) \wedge ((v3_rlvect.1 X0) \wedge ((v4_rlvect.1 X0) \wedge ((v5_rlvect.1 X0) \wedge \\ & ((v6_rlvect.1 X0) \wedge ((v7_rlvect.1 X0) \wedge ((v8_rlvect.1 X0) \wedge ((v2_bhsp.1 \\ & X0) \wedge (l1_bhsp.1 X0)))))))))) \Rightarrow (\forall X1. (m1_rusub.3 X1 X0) \Rightarrow \\ & (m1_subset.1 X1 (k1_zfmisc.1 (u1_struct.0 X0)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct.0 X0) \wedge ((v13_algstr.0 X0) \wedge ((v2_rlvect.1 \\ & X0) \wedge ((v3_rlvect.1 X0) \wedge ((v4_rlvect.1 X0) \wedge ((v5_rlvect.1 X0) \wedge \\ & ((v6_rlvect.1 X0) \wedge ((v7_rlvect.1 X0) \wedge ((v8_rlvect.1 X0) \wedge ((v2_bhsp.1 \\ & X0) \wedge (l1_bhsp.1 X0)))))))))) \Rightarrow (m1_subset.1 (k1_rusub.4 X0) k5_numbers) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0. (&(\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\ &X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\ &((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge ((v2_bhsp_1 \\ &X0) \wedge (l1_bhsp_1 X0)))))))))) \Rightarrow (k2_rusub_1 X0 = g1_bhsp_1 (u1_struct_0 \\ &X0) (u2_struct_0 X0) (u1_algstr_0 X0) (u1_rlvect_1 X0) (u1_bhsp_1 \\ &X0)) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0. (&(\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\ &X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\ &((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge ((v2_bhsp_1 \\ &X0) \wedge (l1_bhsp_1 X0)))))))))) \Rightarrow ((v1_rusub_4 X0) \Rightarrow (\forall X1. \\ &(m1_subset_1 X1 k5_numbers) \Rightarrow ((X1 = k1_rusub_4 X0) \Leftrightarrow (\forall X2. \\ &(m1_rusub_3 X2 X0) \Rightarrow (X1 = k1_card_1 X2)))))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0. (&(\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\ &X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\ &((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge ((v2_bhsp_1 \\ &X0) \wedge (l1_bhsp_1 X0)))))))))) \Rightarrow (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 \\ &(u1_struct_0 X0))) \Rightarrow ((m1_rusub_3 X1 X0) \Leftrightarrow ((v1_rlvect_3 X1 X0) \wedge \\ &(k1_rusub_3 X0 X1 = g1_bhsp_1 (u1_struct_0 X0) (u2_struct_0 X0) \\ &(u1_algstr_0 X0) (u1_rlvect_1 X0) (u1_bhsp_1 X0)))))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0. (&(\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\ &X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\ &((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge ((v2_bhsp_1 \\ &X0) \wedge (l1_bhsp_1 X0)))))))))) \Rightarrow ((v1_rusub_4 X0) \Leftrightarrow (\exists X1. \\ &((v1_finset_1 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\ &X0)))) \wedge (m1_rusub_3 X1 X0))) \end{aligned} \quad (7)$$

Theorem 1

$$\begin{aligned} \forall X0. (&(\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\ &X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\ &((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge ((v2_bhsp_1 \\ &X0) \wedge ((v1_rusub_4 X0) \wedge (l1_bhsp_1 X0)))))))))) \Rightarrow (k1_rusub_4 \\ &X0 = k1_rusub_4 (k2_rusub_1 X0)) \end{aligned}$$