

t17_rusub_5

(TMZsA2gmFpUgjHbUUNsTHhPA8QYLrSTtqNW)

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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 $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v2_rusub_4 : \iota \Rightarrow \iota \Rightarrow o$ 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 $k1_rusub_5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_rusub_5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_rusub_4 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. \neg (X0 \in X1) \wedge (v1_xboole_0 X1) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge (l1_rlvect_1 X0)))))))))) \Rightarrow (\forall X1. ((\neg v1_xboole_0 X1) \wedge ((v2_rusub_4 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))))) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\neg (X2 \in X1) \wedge (\forall X3. ((\neg v1_xboole_0 X3) \wedge ((v2_rusub_4 X3 X0) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (u1_struct_0 X0))))) \Rightarrow (\neg (X3 = k1_rusub_5 X0 X1 (k6_domain_1 (u1_struct_0 X0) X2)) \wedge ((r1_rusub_5 X0 X1 X3) \wedge (v3_rusub_4 X3 X0))))))) \quad (3) \end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\
& X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\
& ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge (l1_rlvect_1 \\
& X0)))))))))) \Rightarrow (\forall X1.((\neg v1_xboole_0 X1) \wedge ((v2_rusub_4 X1 \\
& X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0)))))) \Rightarrow (\forall X2. \\
& ((\neg v1_xboole_0 X2) \wedge ((v2_rusub_4 X2 X0) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\
& (u1_struct_0 X0)))))) \Rightarrow (\forall X3.((\neg v1_xboole_0 X3) \wedge ((v2_rusub_4 \\
& X3 X0) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (u1_struct_0 X0)))))) \Rightarrow (((\\
& v3_rusub_4 X2 X0) \wedge ((v3_rusub_4 X3 X0) \wedge ((r1_rusub_5 X0 X1 X2) \wedge (\\
& r1_rusub_5 X0 X1 X3)))) \Rightarrow (X2 = X3))))))
\end{aligned} \tag{4}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\
& X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\
& ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge (l1_rlvect_1 \\
& X0)))))))))) \Rightarrow (\forall X1.((\neg v1_xboole_0 X1) \wedge ((v2_rusub_4 X1 \\
& X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0)))))) \Rightarrow (\forall X2. \\
& (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 \\
& (u1_struct_0 X0)) \Rightarrow (((X2 \in X1) \wedge (X3 \in X1)) \Rightarrow (k1_rusub_5 X0 X1 (k6_domain_1 \\
& (u1_struct_0 X0) X3) = k1_rusub_5 X0 X1 (k6_domain_1 (u1_struct_0 \\
& X0) X2))))))
\end{aligned}$$