

t32_jgraph_4 (TMc- SMeWMQQpRRWa24ox1xtZspWn9sqgC3jh)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k15_euclid : \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $k1_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_jgraph_4 : \iota \Rightarrow \iota$ be given. Let $k8_struct_0 : \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $k17_euclid : \iota \Rightarrow \iota$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_real_1 : \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $v5_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $v2_pre_topc : \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ 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 $v7_ordinal1 : \iota \Rightarrow o$ 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 $v5_rltopsp1 : \iota \Rightarrow o$ be given. Let $l1_rltopsp1 : \iota \Rightarrow o$ be given. Let $l1_rlvect_1 : \iota \Rightarrow o$ be given. Let $v6_membered : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(l1_pre_topc X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (u1_struct_0 (k1_pre_topc X0 X1) = X1)) \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.((v2_pre_topc X0) \wedge (l1_pre_topc X0)) \Rightarrow (\forall X1. \\ (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\forall X2. \\ (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\forall X3. \\ (m1_subset_1 X3 (k1_zfmisc_1 (u1_struct_0 (k1_pre_topc X0 X2)))) \Rightarrow \\ (((X1 = X3) \wedge (r1_tarski X1 X2)) \Rightarrow (k1_pre_topc X0 X1 = k1_pre_topc \\ (k1_pre_topc X0 X2) X3)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X0 (k1_zfmisc_1 X1)) \Leftrightarrow (r1_tarski X0 X1) \quad (3)$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\
& X1 (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2)))) \Rightarrow (\forall X2. \\
& (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2)))) \Rightarrow \\
& (\forall X3.((v1_funct_1 X3) \wedge ((v1_funct_2 X3 (u1_struct_0 (k1_pre_topc \\
& (k15_euclid np_2) X1)) (u1_struct_0 (k1_pre_topc (k15_euclid \\
& np_2) X2))) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\
& (k1_pre_topc (k15_euclid np_2) X1)) (u1_struct_0 (k1_pre_topc \\
& (k15_euclid np_2) X2)))))) \Rightarrow (((X3 = k2_partfun1 (u1_struct_0 \\
& (k15_euclid np_2)) (u1_struct_0 (k15_euclid np_2)) (k3_jgraph_4 \\
& X0) X1) \wedge ((X2 = k8_struct_0 (k15_euclid np_2)) \wedge (X1 = ReplSep (toset \\
& (\lambda X4 : \iota.m1_subset_1 X4 (u1_struct_0 (k15_euclid np_2)))) \\
& (\lambda X4 : \iota.(r1_xxreal_0 k6_numbers (k17_euclid X4)) \wedge (X4 \neq k4_struct_0 \\
& (k15_euclid np_2)) (\lambda X4 : \iota.X4)))) \Rightarrow ((r1_xxreal_0 X0 (k1_real_1 \\
& np_1)) \vee ((r1_xxreal_0 np_1 X0) \vee (v5_pre_topc X3 (k1_pre_topc \\
& (k15_euclid np_2) X1) (k1_pre_topc (k15_euclid np_2) X2))))))
\end{aligned} \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((r1_tarski X0 X1) \wedge (r1_tarski X1 X2)) \Rightarrow (r1_tarski X0 X2) \tag{5}$$

Assume the following.

$$\begin{aligned}
& ((v2_xxreal_0 np_2) \wedge (m2_subset_1 np_2 k1_numbers k5_numbers)) \wedge \\
& ((m1_subset_1 np_2 k5_numbers) \wedge (m1_subset_1 np_2 k1_numbers))
\end{aligned} \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.r1_tarski X0 X0 \tag{7}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(v7_ordinal1 X0) \Rightarrow ((v2_pre_topc (k15_euclid X0)) \wedge \\
& ((v13_algstr_0 (k15_euclid X0)) \wedge ((v2_rlvect_1 (k15_euclid X0)) \wedge \\
& ((v3_rlvect_1 (k15_euclid X0)) \wedge ((v4_rlvect_1 (k15_euclid X0)) \wedge \\
& ((v5_rlvect_1 (k15_euclid X0)) \wedge ((v6_rlvect_1 (k15_euclid X0)) \wedge \\
& ((v7_rlvect_1 (k15_euclid X0)) \wedge ((v8_rlvect_1 (k15_euclid X0)) \wedge \\
& (v5_rltopsp1 (k15_euclid X0))))))))))
\end{aligned} \tag{8}$$

Assume the following.

$$\forall X0.(l1_rltopsp1 X0) \Rightarrow ((l1_rlvect_1 X0) \wedge (l1_pre_topc X0)) \tag{9}$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow ((v5_rltopsp1 (k15_euclid X0)) \wedge (l1_rltopsp1 (k15_euclid X0))) \tag{10}$$

Assume the following.

$$\forall X0.(v6_membered\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ X0)\Rightarrow (v7_ordinal1\ X1)) \quad (11)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ (k1_zfmisc_1\ k5_numbers))\Rightarrow(v6_membered\ X0) \quad (12)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1\ X0\ k1_numbers)\Rightarrow(\forall X1.(m1_subset_1 \\ & X1\ (k1_zfmisc_1\ (u1_struct_0\ (k15_euclid\ np_2))))\Rightarrow(\forall X2. \\ & (m1_subset_1\ X2\ (k1_zfmisc_1\ (u1_struct_0\ (k1_pre_topc\ (k15_euclid \\ & np_2)\ X1))))\Rightarrow(\forall X3.(((v1_funct_1\ X3)\wedge((v1_funct_2\ X3\ (\\ & u1_struct_0\ (k1_pre_topc\ (k1_pre_topc\ (k15_euclid\ np_2)\ X1) \\ & X2))\ (u1_struct_0\ (k1_pre_topc\ (k15_euclid\ np_2)\ X1))))\wedge(m1_subset_1 \\ & X3\ (k1_zfmisc_1\ (k2_zfmisc_1\ (u1_struct_0\ (k1_pre_topc\ (k1_pre_topc \\ & (k15_euclid\ np_2)\ X1)\ X2))\ (u1_struct_0\ (k1_pre_topc\ (k15_euclid \\ & np_2)\ X1))))))\Rightarrow(((X3 = k2_partfun1\ (u1_struct_0\ (k15_euclid \\ & np_2))\ (u1_struct_0\ (k15_euclid\ np_2))\ (k3_jgraph_4\ X0)\ X2)\wedge \\ & ((X1 = k8_struct_0\ (k15_euclid\ np_2))\wedge(X2 = ReplSep\ (toset\ (\lambda X4 : \\ & \iota.m1_subset_1\ X4\ (u1_struct_0\ (k15_euclid\ np_2))))\ (\lambda X4 : \\ & \iota.(r1_xxreal_0\ k6_numbers\ (k17_euclid\ X4))\wedge(X4\neq k4_struct_0 \\ & (k15_euclid\ np_2)))\ (\lambda X4 : \iota.X4))))\Rightarrow((r1_xxreal_0\ X0\ (k1_real_1 \\ & np_1))\vee((r1_xxreal_0\ np_1\ X0)\vee(v5_pre_topc\ X3\ (k1_pre_topc \\ & (k1_pre_topc\ (k15_euclid\ np_2)\ X1)\ X2)\ (k1_pre_topc\ (k15_euclid \\ & np_2)\ X1)))))) \end{aligned}$$