

t15_jgraph_6
(TMN_{gq1}YekPg1StJYLWZ3TTagX3ehDVavTtt)

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Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k5_topmetr : \iota$ be given. Let $k15_euclid : \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $np_1 : \iota$ be given. Let $v5_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_funct_1 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k12_euclid : \iota \Rightarrow \iota$ be given. Let $k18_euclid : \iota \Rightarrow \iota$ be given. Let $k17_euclid : \iota \Rightarrow \iota$ be given. Let $k1_real_1 : \iota \Rightarrow \iota$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_xboole_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k17_borsuk_1 : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v1_pre_topc : \iota \Rightarrow o$ be given. Let $v2_pre_topc : \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Assume the

following.

$$\begin{aligned}
& \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 (u1_struct_0 k5_topmetr) \\
& (u1_struct_0 (k15_euclid np_2))) \wedge (m1_subset_1 X0 (k1_zfmisc_1 \\
& (k2_zfmisc_1 (u1_struct_0 k5_topmetr) (u1_struct_0 (k15_euclid \\
& np_2)))))) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge ((v1_funct_2 X1 (\\
& u1_struct_0 k5_topmetr) (u1_struct_0 (k15_euclid np_2))) \wedge (\\
& m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 k5_topmetr) \\
& (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. \\
& (m1_subset_1 X3 (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2)))) \Rightarrow \\
& (\forall X4.(m1_subset_1 X4 (k1_zfmisc_1 (u1_struct_0 (k15_euclid \\
& np_2)))) \Rightarrow (\forall X5.(m1_subset_1 X5 (k1_zfmisc_1 (u1_struct_0 \\
& (k15_euclid np_2)))) \Rightarrow (\forall X6.(m1_subset_1 X6 (k1_zfmisc_1 \\
& (u1_struct_0 (k15_euclid np_2)))) \Rightarrow (\forall X7.(m1_subset_1 \\
& X7 (u1_struct_0 k5_topmetr)) \Rightarrow (\forall X8.(m1_subset_1 X8 (u1_struct_0 \\
& k5_topmetr)) \Rightarrow (\neg(X7 = k6_numbers) \wedge ((X8 = np_1) \wedge ((v5_pre_topc \\
& X0 k5_topmetr (k15_euclid np_2)) \wedge ((v2_funct_1 X0) \wedge ((v5_pre_topc \\
& X1 k5_topmetr (k15_euclid np_2)) \wedge ((v2_funct_1 X1) \wedge ((X2 = ReplSep \\
& (toset (\lambda X9 : \iota.m1_subset_1 X9 (u1_struct_0 (k15_euclid np_2)))) \\
& (\lambda X9 : \iota.r1_xxreal_0 (k12_euclid X9) np_1) (\lambda X9 : \iota. \\
& X9)) \wedge ((X3 = ReplSep (toset (\lambda X9 : \iota.m1_subset_1 X9 (u1_struct_0 \\
& (k15_euclid np_2)))) (\lambda X9 : \iota.(k12_euclid X9 = np_1) \wedge ((\\
& r1_xxreal_0 (k18_euclid X9) (k17_euclid X9)) \wedge (r1_xxreal_0 (k1_real_1 \\
& (k17_euclid X9)) (k18_euclid X9)))) (\lambda X9 : \iota.X9) \wedge ((X4 = ReplSep \\
& (toset (\lambda X9 : \iota.m1_subset_1 X9 (u1_struct_0 (k15_euclid np_2)))) \\
& (\lambda X9 : \iota.(k12_euclid X9 = np_1) \wedge ((r1_xxreal_0 (k17_euclid \\
& X9) (k18_euclid X9)) \wedge (r1_xxreal_0 (k18_euclid X9) (k1_real_1 \\
& (k17_euclid X9)))) (\lambda X9 : \iota.X9) \wedge ((X5 = ReplSep (toset (\lambda X9 : \\
& \iota.m1_subset_1 X9 (u1_struct_0 (k15_euclid np_2)))) (\lambda X9 : \\
& \iota.(k12_euclid X9 = np_1) \wedge ((r1_xxreal_0 (k17_euclid X9) (k18_euclid \\
& X9)) \wedge (r1_xxreal_0 (k1_real_1 (k17_euclid X9)) (k18_euclid X9)))) \\
& (\lambda X9 : \iota.X9) \wedge ((X6 = ReplSep (toset (\lambda X9 : \iota.m1_subset_1 \\
& X9 (u1_struct_0 (k15_euclid np_2)))) (\lambda X9 : \iota.(k12_euclid \\
& X9 = np_1) \wedge ((r1_xxreal_0 (k18_euclid X9) (k17_euclid X9)) \wedge (r1_xxreal_0 \\
& (k18_euclid X9) (k1_real_1 (k17_euclid X9)))) (\lambda X9 : \iota.X9) \wedge \\
& ((k3_funct_2 (u1_struct_0 k5_topmetr) (u1_struct_0 (k15_euclid \\
& np_2)) X0 X7 \in X3) \wedge ((k3_funct_2 (u1_struct_0 k5_topmetr) (u1_struct_0 \\
& (k15_euclid np_2)) X0 X8 \in X4) \wedge ((k3_funct_2 (u1_struct_0 k5_topmetr) \\
& (u1_struct_0 (k15_euclid np_2)) X1 X7 \in X5) \wedge ((k3_funct_2 (u1_struct_0 \\
& k5_topmetr) (u1_struct_0 (k15_euclid np_2)) X1 X8 \in X6) \wedge ((r1_tarSKI \\
& (k2_relset_1 (u1_struct_0 (k15_euclid np_2)) X0) X2) \wedge ((r1_tarSKI \\
& (k2_relset_1 (u1_struct_0 (k15_euclid np_2)) X1) X2) \wedge (r1_xboole_0 \\
& (k2_relset_1 (u1_struct_0 (k15_euclid np_2)) X0) (k2_relset_1 \\
& (u1_struct_0 (k15_euclid np_2)) X1)))))))))))))))))))))))))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 (u1_struct_0 k5_topmetr) \\
& (u1_struct_0 (k15_euclid np_2))) \wedge (m1_subset_1 X0 (k1_zfmisc_1 \\
& (k2_zfmisc_1 (u1_struct_0 k5_topmetr) (u1_struct_0 (k15_euclid \\
& np_2)))))) \Rightarrow (\neg(v5_pre_topc X0 k5_topmetr (k15_euclid np_2)) \wedge \\
& ((v2_funct_1 X0) \wedge (\forall X1.((v1_funct_1 X1) \wedge ((v1_funct_2 \\
& X1 (u1_struct_0 k5_topmetr) (u1_struct_0 (k15_euclid np_2))) \wedge \\
& (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 k5_topmetr) \\
& (u1_struct_0 (k15_euclid np_2)))))) \Rightarrow (\neg(k1_funct_1 X1 k6_numbers = \\
& k1_funct_1 X0 np_1) \wedge ((k1_funct_1 X1 np_1 = k1_funct_1 X0 k6_numbers) \wedge \\
& ((k2_relset_1 (u1_struct_0 (k15_euclid np_2)) X1 = k2_relset_1 \\
& (u1_struct_0 (k15_euclid np_2)) X0) \wedge ((v5_pre_topc X1 k5_topmetr \\
& (k15_euclid np_2)) \wedge (v2_funct_1 X1))))))))))
\end{aligned} \tag{2}$$

Assume the following.

$$k5_topmetr = k17_borsuk_1 \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. \forall X3. ((\neg v1_xboole_0 X0) \wedge \\
& (((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\
& (k2_zfmisc_1 X0 X1)))) \wedge (m1_subset_1 X3 X0))) \Rightarrow (k3_funct_2 X0 \\
& X1 X2 X3 = k1_funct_1 X2 X3)
\end{aligned} \tag{4}$$

Assume the following.

$$(\neg v2_struct_0 k17_borsuk_1) \wedge ((v1_pre_topc k17_borsuk_1) \wedge (v2_pre_topc k17_borsuk_1)) \tag{5}$$

Assume the following.

$$\forall X0. ((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\neg v1_xboole_0 (u1_struct_0 X0)) \tag{6}$$

Assume the following.

$$\forall X0. (l1_pre_topc X0) \Rightarrow (l1_struct_0 X0) \tag{7}$$

Assume the following.

$$l1_pre_topc k17_borsuk_1 \tag{8}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 (u1_struct_0 k5_topmetr) \\
& (u1_struct_0 (k15_euclid np_2))) \wedge (m1_subset_1 X0 (k1_zfmisc_1 \\
& (k2_zfmisc_1 (u1_struct_0 k5_topmetr) (u1_struct_0 (k15_euclid \\
& np_2)))))) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge ((v1_funct_2 X1 (\\
& u1_struct_0 k5_topmetr) (u1_struct_0 (k15_euclid np_2))) \wedge (\\
& m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 k5_topmetr) \\
& (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. \\
& (m1_subset_1 X3 (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2)))) \Rightarrow \\
& (\forall X4.(m1_subset_1 X4 (k1_zfmisc_1 (u1_struct_0 (k15_euclid \\
& np_2)))) \Rightarrow (\forall X5.(m1_subset_1 X5 (k1_zfmisc_1 (u1_struct_0 \\
& (k15_euclid np_2)))) \Rightarrow (\forall X6.(m1_subset_1 X6 (k1_zfmisc_1 \\
& (u1_struct_0 (k15_euclid np_2)))) \Rightarrow (\forall X7.(m1_subset_1 \\
& X7 (u1_struct_0 k5_topmetr)) \Rightarrow (\forall X8.(m1_subset_1 X8 (u1_struct_0 \\
& k5_topmetr)) \Rightarrow (\neg(X7 = k6_numbers) \wedge ((X8 = np_1) \wedge ((v5_pre_topc \\
& X0 k5_topmetr (k15_euclid np_2)) \wedge ((v2_funct_1 X0) \wedge ((v5_pre_topc \\
& X1 k5_topmetr (k15_euclid np_2)) \wedge ((v2_funct_1 X1) \wedge ((X2 = ReplSep \\
& (toset (\lambda X9 : \iota.m1_subset_1 X9 (u1_struct_0 (k15_euclid np_2)))) \\
& (\lambda X9 : \iota.r1_xxreal_0 (k12_euclid X9) np_1) (\lambda X9 : \iota. \\
& X9)) \wedge ((X3 = ReplSep (toset (\lambda X9 : \iota.m1_subset_1 X9 (u1_struct_0 \\
& (k15_euclid np_2)))) (\lambda X9 : \iota.(k12_euclid X9 = np_1) \wedge ((\\
& r1_xxreal_0 (k18_euclid X9) (k17_euclid X9)) \wedge (r1_xxreal_0 (k1_real_1 \\
& (k17_euclid X9) (k18_euclid X9)))) (\lambda X9 : \iota.X9)) \wedge ((X4 = ReplSep \\
& (toset (\lambda X9 : \iota.m1_subset_1 X9 (u1_struct_0 (k15_euclid np_2)))) \\
& (\lambda X9 : \iota.(k12_euclid X9 = np_1) \wedge ((r1_xxreal_0 (k17_euclid \\
& X9) (k18_euclid X9)) \wedge (r1_xxreal_0 (k18_euclid X9) (k1_real_1 \\
& (k17_euclid X9)))) (\lambda X9 : \iota.X9)) \wedge ((X5 = ReplSep (toset (\lambda X9 : \\
& \iota.m1_subset_1 X9 (u1_struct_0 (k15_euclid np_2)))) (\lambda X9 : \\
& \iota.(k12_euclid X9 = np_1) \wedge ((r1_xxreal_0 (k17_euclid X9) (k18_euclid \\
& X9)) \wedge (r1_xxreal_0 (k1_real_1 (k17_euclid X9) (k18_euclid X9)))) \\
& (\lambda X9 : \iota.X9)) \wedge ((X6 = ReplSep (toset (\lambda X9 : \iota.m1_subset_1 \\
& X9 (u1_struct_0 (k15_euclid np_2)))) (\lambda X9 : \iota.(k12_euclid \\
& X9 = np_1) \wedge ((r1_xxreal_0 (k18_euclid X9) (k17_euclid X9)) \wedge (r1_xxreal_0 \\
& (k18_euclid X9) (k1_real_1 (k17_euclid X9)))) (\lambda X9 : \iota.X9)) \wedge \\
& ((k3_funct_2 (u1_struct_0 k5_topmetr) (u1_struct_0 (k15_euclid \\
& np_2)) X0 X7 \in X3) \wedge ((k3_funct_2 (u1_struct_0 k5_topmetr) (u1_struct_0 \\
& (k15_euclid np_2)) X0 X8 \in X4) \wedge ((k3_funct_2 (u1_struct_0 k5_topmetr) \\
& (u1_struct_0 (k15_euclid np_2)) X1 X7 \in X6) \wedge ((k3_funct_2 (u1_struct_0 \\
& k5_topmetr) (u1_struct_0 (k15_euclid np_2)) X1 X8 \in X5) \wedge ((r1_tarski \\
& (k2_relset_1 (u1_struct_0 (k15_euclid np_2)) X0) X2) \wedge ((r1_tarski \\
& (k2_relset_1 (u1_struct_0 (k15_euclid np_2)) X1) X2) \wedge (r1_xboole_0 \\
& (k2_relset_1 (u1_struct_0 (k15_euclid np_2)) X0) (k2_relset_1 \\
& (u1_struct_0 (k15_euclid np_2)) X1)))))))))))))))))))))))))
\end{aligned}$$