

t109_jgraph_7

(TMEgy9Z8XrG83z4iJSArpmk8RVpFCFTTiuj)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k18_euclid : \iota \Rightarrow \iota$ be given. Let $k17_euclid : \iota \Rightarrow \iota$ be given. Let $r1_topreal1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_jgraph_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_xboole_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ 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 $k5_topmetr : \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $np_1 : \iota$ 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 $k1_numbers : \iota$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\
 & \quad X1 (k1_zfmisc_1 (u1_struct_0 (k15_euclid X0)))) \Rightarrow (\forall X2. \\
 & \quad (m1_subset_1 X2 (u1_struct_0 (k15_euclid X0))) \Rightarrow (\forall X3.(\\
 & \quad \quad m1_subset_1 X3 (u1_struct_0 (k15_euclid X0))) \Rightarrow (\neg(r1_topreal1 \\
 & \quad (k15_euclid X0) X2 X3 X1) \wedge (\forall X4.((v1_funct_1 X4) \wedge ((v1_funct_2 \\
 & \quad \quad X4 (u1_struct_0 k5_topmetr) (u1_struct_0 (k15_euclid X0))) \wedge (\\
 & \quad \quad m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 k5_topmetr) \\
 & \quad \quad (u1_struct_0 (k15_euclid X0)))))) \Rightarrow (\neg(v5_pre_topc X4 k5_topmetr \\
 & \quad \quad (k15_euclid X0)) \wedge ((v2_funct_1 X4) \wedge ((k2_relset_1 (u1_struct_0 \\
 & \quad \quad (k15_euclid X0)) X4 = X1) \wedge ((k1_funct_1 X4 k6_numbers = X2) \wedge (k1_funct_1 \\
 & \quad \quad X4 np_1 = X3))))))))))
 \end{aligned}
 \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\
& (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\
& (\forall X2.(m1_subset_1 X2 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\
& (\forall X3.(m1_subset_1 X3 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\
& (\forall X4.(v1_xreal_0 X4) \Rightarrow (\forall X5.(v1_xreal_0 X5) \Rightarrow (\forall X6. \\
& (v1_xreal_0 X6) \Rightarrow (\forall X7.(v1_xreal_0 X7) \Rightarrow (\forall X8.((v1_funct_1 \\
& X8) \wedge ((v1_funct_2 X8 (u1_struct_0 k5_topmetr) (u1_struct_0 (k15_euclid \\
& np_2))) \wedge (m1_subset_1 X8 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\
& k5_topmetr) (u1_struct_0 (k15_euclid np_2)))))) \Rightarrow (\forall X9. \\
& ((v1_funct_1 X9) \wedge ((v1_funct_2 X9 (u1_struct_0 k5_topmetr) (u1_struct_0 \\
& (k15_euclid np_2))) \wedge (m1_subset_1 X9 (k1_zfmisc_1 (k2_zfmisc_1 \\
& (u1_struct_0 k5_topmetr) (u1_struct_0 (k15_euclid np_2)))))) \Rightarrow \\
& (\neg(\neg r1_xxreal_0 X5 X4) \wedge (\neg r1_xxreal_0 X7 X6) \wedge ((k18_euclid X0 = \\
& X7) \wedge ((k18_euclid X1 = X7) \wedge ((k18_euclid X2 = X7) \wedge ((k18_euclid X3 = \\
& X7) \wedge ((r1_xxreal_0 X4 (k17_euclid X0)) \wedge (\neg r1_xxreal_0 (k17_euclid \\
& X1) (k17_euclid X0)) \wedge (\neg r1_xxreal_0 (k17_euclid X2) (k17_euclid \\
& X1)) \wedge (\neg r1_xxreal_0 (k17_euclid X3) (k17_euclid X2)) \wedge ((r1_xxreal_0 \\
& (k17_euclid X3) X5) \wedge ((k1_funct_1 X8 k6_numbers = X0) \wedge ((k1_funct_1 \\
& X8 np_1 = X2) \wedge ((k1_funct_1 X9 k6_numbers = X1) \wedge ((k1_funct_1 X9 \\
& np_1 = X3) \wedge ((v5_pre_topc X8 k5_topmetr (k15_euclid np_2)) \wedge (\\
& (v2_funct_1 X8) \wedge ((v5_pre_topc X9 k5_topmetr (k15_euclid np_2)) \wedge \\
& ((v2_funct_1 X9) \wedge ((r1_tarski (k2_relset_1 (u1_struct_0 (k15_euclid \\
& np_2)) X8) (k2_jgraph_6 X4 X5 X6 X7)) \wedge ((r1_tarski (k2_relset_1 \\
& (u1_struct_0 (k15_euclid np_2)) X9) (k2_jgraph_6 X4 X5 X6 X7)) \wedge \\
& (r1_xboole_0 (k2_relset_1 (u1_struct_0 (k15_euclid np_2)) X8) \\
& (k2_relset_1 (u1_struct_0 (k15_euclid np_2)) X9))))))))))))))))))))))))) \\
& \hspace{15em} (2)
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& ((v2_xxreal_0 np_2) \wedge (m2_subset_1 np_2 k1_numbers k5_numbers)) \wedge \\
& ((m1_subset_1 np_2 k5_numbers) \wedge (m1_subset_1 np_2 k1_numbers)) \hspace{1em} (3)
\end{aligned}$$

Theorem 1

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\
& (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\
& (\forall X2.(m1_subset_1 X2 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\
& (\forall X3.(m1_subset_1 X3 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\
& (\forall X4.(v1_xreal_0 X4) \Rightarrow (\forall X5.(v1_xreal_0 X5) \Rightarrow (\forall X6. \\
& (v1_xreal_0 X6) \Rightarrow (\forall X7.(v1_xreal_0 X7) \Rightarrow (\forall X8.(m1_subset_1 \\
& X8 (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2)))) \Rightarrow (\forall X9. \\
& (m1_subset_1 X9 (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2)))))) \Rightarrow \\
& (\neg(\neg r1_xxreal_0 X5 X4) \wedge (\neg r1_xxreal_0 X7 X6) \wedge ((k18_euclid X0 = \\
& X7) \wedge ((k18_euclid X1 = X7) \wedge ((k18_euclid X2 = X7) \wedge ((k18_euclid X3 = \\
& X7) \wedge ((r1_xxreal_0 X4 (k17_euclid X0)) \wedge (\neg r1_xxreal_0 (k17_euclid \\
& X1) (k17_euclid X0)) \wedge (\neg r1_xxreal_0 (k17_euclid X2) (k17_euclid \\
& X1)) \wedge (\neg r1_xxreal_0 (k17_euclid X3) (k17_euclid X2)) \wedge ((r1_xxreal_0 \\
& (k17_euclid X3) X5) \wedge ((r1_topreal1 (k15_euclid np_2) X0 X2 X8) \wedge \\
& ((r1_topreal1 (k15_euclid np_2) X1 X3 X9) \wedge ((r1_tarski X8 (k2_jgraph_6 \\
& X4 X5 X6 X7)) \wedge ((r1_tarski X9 (k2_jgraph_6 X4 X5 X6 X7)) \wedge (r1_xboole_0 \\
& X8 X9))))))))))))))))))))))
\end{aligned}$$