

t13_jgraph_6

(TMRX829p79fM6p2eyuXqTJ8brxTkWmJZJ2G)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v2_pre_topc : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k15_euclid : \iota \Rightarrow \iota$ 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 $k3_topmetr : \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ 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 $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_rlvect_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_rlvect_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\
 & \quad X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 k5_numbers) \Rightarrow (\forall X2.(\\
 & \quad m1_subset_1 X2 (u1_struct_0 (k15_euclid X1))) \Rightarrow (\forall X3.((\\
 & \quad v1_funct_1 X3) \wedge ((v1_funct_2 X3 (u1_struct_0 X0) (u1_struct_0 \\
 & \quad k3_topmetr)) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\
 & \quad X0) (u1_struct_0 k3_topmetr)))))) \Rightarrow (\neg (v5_pre_topc X3 X0 k3_topmetr) \wedge \\
 & \quad (\forall X4.((v1_funct_1 X4) \wedge ((v1_funct_2 X4 (u1_struct_0 X0) \\
 & \quad (u1_struct_0 (k15_euclid X1))) \wedge (m1_subset_1 X4 (k1_zfmisc_1 \\
 & \quad (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 (k15_euclid X1)))))) \Rightarrow \\
 & \quad (\neg (\forall X5.(m1_subset_1 X5 (u1_struct_0 X0)) \Rightarrow (k3_funct_2 \\
 & \quad (u1_struct_0 X0) (u1_struct_0 (k15_euclid X1)) X4 X5 = k1_rlvect_1 \\
 & \quad (k15_euclid X1) X2 (k3_funct_2 (u1_struct_0 X0) (u1_struct_0 k3_topmetr) \\
 & \quad X3 X5))) \wedge (v5_pre_topc X4 X0 (k15_euclid X1)))))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\
& \quad X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 k5_numbers) \Rightarrow (\forall X2.(\\
& \quad (v1_funct_1 X2) \wedge ((v1_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 \\
& \quad (k15_euclid X1))) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\
& \quad (u1_struct_0 X0) (u1_struct_0 (k15_euclid X1)))))) \Rightarrow (\forall X3. \\
& \quad ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 (u1_struct_0 X0) (u1_struct_0 \\
& \quad (k15_euclid X1))) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 \\
& \quad (u1_struct_0 X0) (u1_struct_0 (k15_euclid X1)))))) \Rightarrow (\neg (v5_pre_topc \\
& \quad X2 X0 (k15_euclid X1)) \wedge ((v5_pre_topc X3 X0 (k15_euclid X1)) \wedge (\forall X4. \\
& \quad ((v1_funct_1 X4) \wedge ((v1_funct_2 X4 (u1_struct_0 X0) (u1_struct_0 \\
& \quad (k15_euclid X1))) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 \\
& \quad (u1_struct_0 X0) (u1_struct_0 (k15_euclid X1)))))) \Rightarrow (\neg (\forall X5. \\
& \quad (m1_subset_1 X5 (u1_struct_0 X0)) \Rightarrow (k3_funct_2 (u1_struct_0 X0) \\
& \quad (u1_struct_0 (k15_euclid X1)) X4 X5 = k3_rlvect_1 (k15_euclid X1) \\
& \quad (k3_funct_2 (u1_struct_0 X0) (u1_struct_0 (k15_euclid X1)) X2 \\
& \quad X5) (k3_funct_2 (u1_struct_0 X0) (u1_struct_0 (k15_euclid X1)) \\
& \quad X3 X5))) \wedge (v5_pre_topc X4 X0 (k15_euclid X1))))))))) \\
& \tag{2}
\end{aligned}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\
& \quad X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 k5_numbers) \Rightarrow (\forall X2.(\\
& \quad m1_subset_1 X2 (u1_struct_0 (k15_euclid X1))) \Rightarrow (\forall X3.(m1_subset_1 \\
& \quad X3 (u1_struct_0 (k15_euclid X1))) \Rightarrow (\forall X4.((v1_funct_1 X4) \wedge \\
& \quad ((v1_funct_2 X4 (u1_struct_0 X0) (u1_struct_0 k3_topmetr)) \wedge (\\
& \quad m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 \\
& \quad k3_topmetr)))))) \Rightarrow (\forall X5.((v1_funct_1 X5) \wedge ((v1_funct_2 \\
& \quad X5 (u1_struct_0 X0) (u1_struct_0 k3_topmetr)) \wedge (m1_subset_1 X5 \\
& \quad (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 k3_topmetr)))))) \Rightarrow \\
& \quad (\neg (v5_pre_topc X4 X0 k3_topmetr) \wedge ((v5_pre_topc X5 X0 k3_topmetr) \wedge \\
& \quad (\forall X6.((v1_funct_1 X6) \wedge ((v1_funct_2 X6 (u1_struct_0 X0) \\
& \quad (u1_struct_0 (k15_euclid X1))) \wedge (m1_subset_1 X6 (k1_zfmisc_1 \\
& \quad (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 (k15_euclid X1)))))) \Rightarrow \\
& \quad (\neg (\forall X7.(m1_subset_1 X7 (u1_struct_0 X0)) \Rightarrow (k3_funct_2 \\
& \quad (u1_struct_0 X0) (u1_struct_0 (k15_euclid X1)) X6 X7 = k3_rlvect_1 \\
& \quad (k15_euclid X1) (k1_rlvect_1 (k15_euclid X1) X2 (k3_funct_2 (u1_struct_0 \\
& \quad X0) (u1_struct_0 k3_topmetr) X4 X7)) (k1_rlvect_1 (k15_euclid \\
& \quad X1) X3 (k3_funct_2 (u1_struct_0 X0) (u1_struct_0 k3_topmetr) X5 \\
& \quad X7)))) \wedge (v5_pre_topc X6 X0 (k15_euclid X1))))))))) \\
& \tag{2}
\end{aligned}$$