

t24_jgraph_2
 (TMFabUa2jnstMxUr8DgvvDkfqCFRsLq6Hf1)

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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 $v1_funct_1 : \iota \Rightarrow o$ 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 $k3_topmetr : \iota$ 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 $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $v5_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\
 & \quad X0))) \Rightarrow (\forall X1. (v1_xreal_0 X1) \Rightarrow (\exists X2. ((v1_funct_1 \\
 & \quad X2) \wedge ((v1_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 k3_topmetr)) \wedge \\
 & \quad (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 \\
 & \quad k3_topmetr)))))) \wedge ((\forall X3. (m1_subset_1 X3 (u1_struct_0 \\
 & \quad X0)) \Rightarrow (k3_funct_2 (u1_struct_0 X0) (u1_struct_0 k3_topmetr) X2 \\
 & \quad X3 = X1)) \wedge (v5_pre_topc X2 X0 k3_topmetr))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\
& X0))) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge ((v1_funct_2 X1 (u1_struct_0 \\
& X0) (u1_struct_0 k3_topmetr)) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (\\
& k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 k3_topmetr)))))) \Rightarrow \\
& (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 X2 (u1_struct_0 X0) \\
& (u1_struct_0 k3_topmetr)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\
& (u1_struct_0 X0) (u1_struct_0 k3_topmetr)))))) \Rightarrow (\neg(v5_pre_topc \\
& X1 X0 k3_topmetr) \wedge ((v5_pre_topc X2 X0 k3_topmetr) \wedge (\forall X3. \\
& ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 (u1_struct_0 X0) (u1_struct_0 \\
& k3_topmetr)) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\
& X0) (u1_struct_0 k3_topmetr)))))) \Rightarrow (\neg(\forall X4.(m1_subset_1 \\
& X4 (u1_struct_0 X0)) \Rightarrow (\forall X5.(v1_xreal_0 X5) \Rightarrow (\forall X6. \\
& (v1_xreal_0 X6) \Rightarrow (((k3_funct_2 (u1_struct_0 X0) (u1_struct_0 \\
& k3_topmetr) X1 X4 = X5) \wedge (k3_funct_2 (u1_struct_0 X0) (u1_struct_0 \\
& k3_topmetr) X2 X4 = X6)) \Rightarrow (k3_funct_2 (u1_struct_0 X0) (u1_struct_0 \\
& k3_topmetr) X3 X4 = k2_xcmplx_0 X5 X6)))))) \wedge (v5_pre_topc X3 X0 k3_topmetr)))))) \\
& \hspace{15em} (2)
\end{aligned}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\
& X0))) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge ((v1_funct_2 X1 (u1_struct_0 \\
& X0) (u1_struct_0 k3_topmetr)) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (\\
& k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 k3_topmetr)))))) \Rightarrow \\
& (\forall X2.(v1_xreal_0 X2) \Rightarrow (\neg(v5_pre_topc X1 X0 k3_topmetr) \wedge \\
& (\forall X3.((v1_funct_1 X3) \wedge ((v1_funct_2 X3 (u1_struct_0 X0) \\
& (u1_struct_0 k3_topmetr)) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 \\
& (u1_struct_0 X0) (u1_struct_0 k3_topmetr)))))) \Rightarrow (\neg(\forall X4. \\
& (m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow (\forall X5.(v1_xreal_0 X5) \Rightarrow \\
& ((k3_funct_2 (u1_struct_0 X0) (u1_struct_0 k3_topmetr) X1 X4 = \\
& X5) \Rightarrow (k3_funct_2 (u1_struct_0 X0) (u1_struct_0 k3_topmetr) X3 \\
& X4 = k2_xcmplx_0 X5 X2)))))) \wedge (v5_pre_topc X3 X0 k3_topmetr))))))
\end{aligned}$$