

t8_jgraph_6

(TMN7JqCzNJ7d9K9UBsL1es7r7q2kHhooVzo)

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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 $k6_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\
 & X0))) \Rightarrow (\forall X1. ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 (u1_struct_0 \\
 & X0) (u1_struct_0 k3_topmetr)) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (\\
 & k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 k3_topmetr)))))) \Rightarrow \\
 & (\forall X2. ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 (u1_struct_0 X0) \\
 & (u1_struct_0 k3_topmetr)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\
 & (u1_struct_0 X0) (u1_struct_0 k3_topmetr)))))) \Rightarrow (\neg (v5_pre_topc \\
 & X1 X0 k3_topmetr) \wedge ((v5_pre_topc X2 X0 k3_topmetr) \wedge (\forall X3. \\
 & ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 (u1_struct_0 X0) (u1_struct_0 \\
 & k3_topmetr)) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\
 & X0) (u1_struct_0 k3_topmetr)))))) \Rightarrow (\neg (\forall X4. (m1_subset_1 \\
 & X4 (u1_struct_0 X0) \Rightarrow (\forall X5. (v1_xreal_0 X5) \Rightarrow (\forall X6. \\
 & (v1_xreal_0 X6) \Rightarrow (((k3_funct_2 (u1_struct_0 X0) (u1_struct_0 \\
 & k3_topmetr) X1 X4 = X5) \wedge (k3_funct_2 (u1_struct_0 X0) (u1_struct_0 \\
 & k3_topmetr) X2 X4 = X6)) \Rightarrow (k3_funct_2 (u1_struct_0 X0) (u1_struct_0 \\
 & k3_topmetr) X3 X4 = k6_xcmplx_0 X5 X6)))))) \wedge (v5_pre_topc X3 X0 k3_topmetr))))))
 \end{aligned}$$

(1)

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\
& \quad X0))) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\exists X2.((v1_funct_1 \\
& \quad X2) \wedge ((v1_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 k3_topmetr)) \wedge \\
& \quad (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 \\
& \quad k3_topmetr)))))) \wedge ((\forall X3.(m1_subset_1 X3 (u1_struct_0 \\
& \quad X0)) \Rightarrow (k3_funct_2 (u1_struct_0 X0) (u1_struct_0 k3_topmetr) X2 \\
& \quad X3 = X1)) \wedge (v5_pre_topc X2 X0 k3_topmetr))))))
\end{aligned} \tag{2}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\
& \quad X0))) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge ((v1_funct_2 X1 (u1_struct_0 \\
& \quad X0) (u1_struct_0 k3_topmetr)) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (\\
& \quad k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 k3_topmetr)))))) \Rightarrow \\
& \quad (\forall X2.(v1_xreal_0 X2) \Rightarrow (\neg (v5_pre_topc X1 X0 k3_topmetr) \wedge \\
& \quad (\forall X3.((v1_funct_1 X3) \wedge ((v1_funct_2 X3 (u1_struct_0 X0) \\
& \quad (u1_struct_0 k3_topmetr)) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 \\
& \quad (u1_struct_0 X0) (u1_struct_0 k3_topmetr)))))) \Rightarrow (\neg (\forall X4. \\
& \quad (m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow (\forall X5.(v1_xreal_0 X5) \Rightarrow \\
& \quad ((k3_funct_2 (u1_struct_0 X0) (u1_struct_0 k3_topmetr) X1 X4 = \\
& \quad X5) \Rightarrow (k3_funct_2 (u1_struct_0 X0) (u1_struct_0 k3_topmetr) X3 \\
& \quad X4 = k6_xcmplx_0 X2 X5)))) \wedge (v5_pre_topc X3 X0 k3_topmetr))))))
\end{aligned}$$