

t6_jgraph_4

(TMXGm62cdgCeGD3mc284qK3piEuB6xPFY5J)

October 27, 2020

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 $v5_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_square_1 : \iota \Rightarrow \iota$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\
 & X0))) \Rightarrow (\forall X1. ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 (u1_struct_0 \\
 & X0) (u1_struct_0 k3_topmetr)) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (\\
 & k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 k3_topmetr)))))) \Rightarrow \\
 & (\neg (v5_pre_topc X1 X0 k3_topmetr) \wedge (\forall X2. ((v1_funct_1 X2) \wedge \\
 & ((v1_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 k3_topmetr)) \wedge (\\
 & m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 \\
 & k3_topmetr)))))) \Rightarrow (\neg (\forall X3. (m1_subset_1 X3 (u1_struct_0 \\
 & X0)) \Rightarrow (\forall X4. (v1_xreal_0 X4) \Rightarrow ((k3_funct_2 (u1_struct_0 \\
 & X0) (u1_struct_0 k3_topmetr) X1 X3 = X4) \Rightarrow (k3_funct_2 (u1_struct_0 \\
 & X0) (u1_struct_0 k3_topmetr) X2 X3 = k3_xcmplx_0 X4 X4)))) \wedge (v5_pre_topc \\
 & X2 X0 k3_topmetr))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. (v1_xcmplx_0 X0) \Rightarrow (k3_square_1 X0 = k3_xcmplx_0 X0 X0) \tag{2}$$

Assume the following.

$$\forall X0. (v1_xreal_0 X0) \Rightarrow (v1_xcmplx_0 X0) \tag{3}$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ & X0))) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge ((v1_funct_2 X1 (u1_struct_0 \\ & X0) (u1_struct_0 k3_topmetr)) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (\\ & k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 k3_topmetr)))))) \Rightarrow \\ & (\neg(v5_pre_topc X1 X0 k3_topmetr) \wedge (\forall X2.((v1_funct_1 X2) \wedge \\ & ((v1_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 k3_topmetr)) \wedge (\\ & m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 \\ & k3_topmetr)))))) \Rightarrow (\neg(\forall X3.(m1_subset_1 X3 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X4.(v1_xreal_0 X4) \Rightarrow ((k3_funct_2 (u1_struct_0 \\ & X0) (u1_struct_0 k3_topmetr) X1 X3 = X4) \Rightarrow (k3_funct_2 (u1_struct_0 \\ & X0) (u1_struct_0 k3_topmetr) X2 X3 = k3_square_1 X4)))) \wedge (v5_pre_topc \\ & X2 X0 k3_topmetr)))))) \end{aligned}$$