

t7_graph_1
(TMEiDA73fBXWBLZgtsydyT51oGZts3t4GA)

October 27, 2020

Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v1_graph_1 : \iota \Rightarrow o$ be given. Let $l1_graph_1 : \iota \Rightarrow o$ be given. Let $k5_graph_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $r1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u2_graph_1 : \iota \Rightarrow \iota$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u4_struct_0 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ 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 $u1_graph_1 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. (((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \wedge ((v1_relat_1 X1) \wedge (v1_funct_1 X1))) \Rightarrow (r1_partfun1 X0 X0) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. k2_xboole_0 X0 X0 = X0 \quad (2)$$

Assume the following.

$$\forall X0. (l1_graph_1 X0) \Rightarrow ((v1_funct_1 (u2_graph_1 X0)) \wedge ((v1_funct_2 (u2_graph_1 X0) (u4_struct_0 X0) (u1_struct_0 X0)) \wedge (m1_subset_1 (u2_graph_1 X0) (k1_zfmisc_1 (k2_zfmisc_1 (u4_struct_0 X0) (u1_struct_0 X0)))))) \quad (3)$$

Assume the following.

$$\forall X0. (l1_graph_1 X0) \Rightarrow ((v1_funct_1 (u1_graph_1 X0)) \wedge ((v1_funct_2 (u1_graph_1 X0) (u4_struct_0 X0) (u1_struct_0 X0)) \wedge (m1_subset_1 (u1_graph_1 X0) (k1_zfmisc_1 (k2_zfmisc_1 (u4_struct_0 X0) (u1_struct_0 X0)))))) \quad (4)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge (l1_graph_1 X0)) \Rightarrow (\forall X1. \\
& ((\neg v2_struct_0 X1) \wedge (l1_graph_1 X1)) \Rightarrow (((r1_partfun1 (u1_graph_1 \\
& X0) (u1_graph_1 X1)) \wedge (r1_partfun1 (u2_graph_1 X0) (u2_graph_1 \\
& X1))) \Rightarrow (\forall X2.((\neg v2_struct_0 X2) \wedge ((v1_graph_1 X2) \wedge (l1_graph_1 \\
& X2))) \Rightarrow ((X2 = k5_graph_1 X0 X1) \Leftrightarrow ((u1_struct_0 X2 = k2_xboole_0 (\\
& u1_struct_0 X0) (u1_struct_0 X1)) \wedge ((u4_struct_0 X2 = k2_xboole_0 \\
& (u4_struct_0 X0) (u4_struct_0 X1)) \wedge ((\forall X3.(X3 \in u4_struct_0 \\
& X0) \Rightarrow ((k1_funct_1 (u1_graph_1 X2) X3 = k1_funct_1 (u1_graph_1 X0) \\
& X3) \wedge (k1_funct_1 (u2_graph_1 X2) X3 = k1_funct_1 (u2_graph_1 X0) \\
& X3))) \wedge (\forall X3.(X3 \in u4_struct_0 X1) \Rightarrow ((k1_funct_1 (u1_graph_1 \\
& X2) X3 = k1_funct_1 (u1_graph_1 X1) X3) \wedge (k1_funct_1 (u2_graph_1 \\
& X2) X3 = k1_funct_1 (u2_graph_1 X1) X3))))))))))
\end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. (m1_subset_1 X2 (k1_zfmisc_1 \\
& (k2_zfmisc_1 X0 X1))) \Rightarrow (v1_relat_1 X2)
\end{aligned} \tag{6}$$

Theorem 1

$$\begin{aligned}
& \forall X0. ((\neg v2_struct_0 X0) \wedge ((v1_graph_1 X0) \wedge (l1_graph_1 \\
& X0))) \Rightarrow (X0 = k5_graph_1 X0 X0)
\end{aligned}$$