

t5_jgraph_6
(TMG7h2HZ3G6DZUBurASQvmi4TQCV5hobuoY)

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Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ 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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_struct_0 : \iota \Rightarrow \iota$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\neg v1_xboole_0 (u1_struct_0 X0)) \quad (1)$$

Assume the following.

$$v1_xboole_0 k1_xboole_0 \quad (2)$$

Assume the following.

$$\forall X0.(l1_pre_topc X0) \Rightarrow (l1_struct_0 X0) \quad (3)$$

Assume the following.

$$\forall X0.(l1_struct_0 X0) \Rightarrow (k2_struct_0 X0 = u1_struct_0 X0) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1))) \Rightarrow (((X1 \neq k1_xboole_0) \Rightarrow ((v1_funct_2 X2 X0 \\ & X1) \Leftrightarrow (X0 = k1_relset_1 X0 X2))) \wedge ((X1 = k1_xboole_0) \Rightarrow ((v1_funct_2 \\ & X2 X0 X1) \Leftrightarrow (X2 = k1_xboole_0)))) \end{aligned} \quad (5)$$

Theorem 1

$$\begin{aligned} & \forall X0.(l1_pre_topc\ X0) \Rightarrow (\forall X1.((\neg v2_struct_0\ X1) \wedge \\ & (l1_pre_topc\ X1)) \Rightarrow (\forall X2.((\neg v2_struct_0\ X2) \wedge (l1_pre_topc \\ & X2)) \Rightarrow (\forall X3.((v1_funct_1\ X3) \wedge ((v1_funct_2\ X3\ (u1_struct_0 \\ & X0)\ (u1_struct_0\ X1)) \wedge (m1_subset_1\ X3\ (k1_zfmisc_1\ (k2_zfmisc_1 \\ & (u1_struct_0\ X0)\ (u1_struct_0\ X1)))))) \Rightarrow (\forall X4.((v1_funct_1 \\ & X4) \wedge ((v1_funct_2\ X4\ (u1_struct_0\ X0)\ (u1_struct_0\ X2)) \wedge (m1_subset_1 \\ & X4\ (k1_zfmisc_1\ (k2_zfmisc_1\ (u1_struct_0\ X0)\ (u1_struct_0\ X2)))))) \Rightarrow \\ & ((k1_relset_1\ (u1_struct_0\ X0)\ X3 = k1_relset_1\ (u1_struct_0\ X0) \\ & X4) \wedge ((k1_relset_1\ (u1_struct_0\ X0)\ X3 = u1_struct_0\ X0) \wedge (k1_relset_1 \\ & (u1_struct_0\ X0)\ X3 = k2_struct_0\ X0)))))) \end{aligned}$$