

t18_necklace

(TMZSaejHz6iEvXyeJMZ97NFZqe9bBW85Rbv)

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Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $u1_orders_2 : \iota \Rightarrow \iota$ be given. Let $k4_necklace : \iota \Rightarrow \iota$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $k2_relat_1 : \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k4_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v1_orders_2 : \iota \Rightarrow o$ be given. Let $k2_necklace : \iota \Rightarrow \iota$ be given. Let $k1_necklace : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0 : \iota \Rightarrow o. \forall X1 : \iota \Rightarrow \iota. \forall X2 : \iota \Rightarrow \iota. \\
 & \forall X3. \forall X4. ((\neg v1_xboole_0 X4) \wedge (v1_relat_1 X3)) \Rightarrow (\\
 & (X3 = ReplSep (toset (\lambda X5 : \iota. m1_subset_1 X5 X4)) (\lambda X5 : \iota. \\
 & X0 X5) (\lambda X5 : \iota. k4_tarski (X2 X5) (X1 X5)))) \Rightarrow (k2_relat_1 X3 = \\
 & ReplSep (toset (\lambda X5 : \iota. m1_subset_1 X5 X4)) (\lambda X5 : \iota. X0 \\
 & X5) (\lambda X5 : \iota. k4_tarski (X1 X5) (X2 X5))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. \forall X1. \forall X2. ((m1_subset_1 X1 (k1_zfmisc_1 \\
 & X0)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 X0))) \Rightarrow (k4_subset_1 X0 X1 X2 = \\
 & k2_xboole_0 X1 X2)
 \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. \forall X1. \forall X2. (m1_subset_1 X2 (k1_zfmisc_1 \\
 & (k2_zfmisc_1 X0 X1))) \Rightarrow (k3_relset_1 X0 X1 X2 = k2_relat_1 X2)
 \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. (l1_orders_2 X0) \Rightarrow (m1_subset_1 (u1_orders_2 X0) (k1_zfmisc_1 \\
 & (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0))))
 \end{aligned} \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(m1_subset_1 (k3_relset_1 X0 X1 X2) (k1_zfmisc_1 (k2_zfmisc_1 X1 X0))) \quad (5)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0)\Rightarrow((v1_orders_2 (k2_necklace X0))\wedge (l1_orders_2 (k2_necklace X0))) \quad (6)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0)\Rightarrow((v1_orders_2 (k1_necklace X0))\wedge (l1_orders_2 (k1_necklace X0))) \quad (7)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0)\Rightarrow(k4_necklace X0 = k2_necklace (k1_necklace X0)) \quad (8)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0)\Rightarrow(\forall X1.((v1_orders_2 X1)\wedge (l1_orders_2 X1))\Rightarrow((X1 = k2_necklace X0)\Leftrightarrow((u1_struct_0 X1 = u1_struct_0 X0)\wedge(u1_orders_2 X1 = k4_subset_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0)) (u1_orders_2 X0) (k3_relset_1 (u1_struct_0 X0) (u1_struct_0 X0) (u1_orders_2 X0)))))) \quad (9)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0)\Rightarrow(\forall X1.((v1_orders_2 X1)\wedge (l1_orders_2 X1))\Rightarrow((X1 = k1_necklace X0)\Leftrightarrow((u1_struct_0 X1 = X0)\wedge (u1_orders_2 X1 = ReplSep (toset (\lambda X2 : \iota.m1_subset_1 X2 k5_numbers)) (\lambda X2 : \iota.\neg r1_xxreal_0 X0 (k2_nat_1 X2 np_1)) (\lambda X2 : \iota.k4_tarski X2 (k2_nat_1 X2 np_1)))))) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(v1_relat_1 X2) \quad (11)$$

Theorem 1

$$\forall X0.(v7_ordinal1 X0)\Rightarrow(u1_orders_2 (k4_necklace X0) = k2_xboole_0 (ReplSep (toset (\lambda X1 : \iota.m1_subset_1 X1 k5_numbers)) (\lambda X1 : \iota.\neg r1_xxreal_0 X0 (k2_nat_1 X1 np_1)) (\lambda X1 : \iota.k4_tarski X1 (k2_nat_1 X1 np_1))) (ReplSep (toset (\lambda X1 : \iota.m1_subset_1 X1 k5_numbers)) (\lambda X1 : \iota.\neg r1_xxreal_0 X0 (k2_nat_1 X1 np_1)) (\lambda X1 : \iota.k4_tarski (k2_nat_1 X1 np_1) X1))))$$