

t21_mycielsk
(TMZ85EgnHnzkm2W8e8pUCAYqGnWhHnLnzh)

October 27, 2020

Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $v2_dilworth : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v1_dilworth : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_necklace : \iota \Rightarrow \iota$ be given. Let $r1_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_orders_2 : \iota \Rightarrow o$ be given. Let $u1_orders_2 : \iota \Rightarrow \iota$ be given. Let $k7_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_partfun1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.(l1_orders_2 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 \\ (u1_struct_0 X0))) \Rightarrow (((v1_dilworth X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ (u1_struct_0 X0)))) \Leftrightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 \\ X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\neg(X2 \in X1) \wedge \\ ((X3 \in X1) \wedge ((X2 \neq X3) \wedge ((\neg r1_orders_2 X0 X2 X3) \wedge (\neg r1_orders_2 X0 \\ X3 X2)))))))))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\neg(X0 \in X1) \wedge ((m1_subset_1 X1 (k1_zfmisc_1 X2)) \wedge (v1_xboole_0 X2)) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \tag{3}$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_orders_2 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. \\ (m1_subset_1 X3 (u1_struct_0 (k3_necklace X0))) \Rightarrow (\forall X4. \\ (m1_subset_1 X4 (u1_struct_0 (k3_necklace X0))) \Rightarrow (((X1 = X3) \wedge \\ (X2 = X4) \wedge (X1 \in u1_struct_0 X0)) \Rightarrow ((X1 = X2) \vee ((r1_orders_2 (k3_necklace \\ X0) X3 X4) \vee (r1_orders_2 X0 X1 X2)))))))))) \end{aligned} \tag{4}$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow ((v1_orders_2 (k3_necklace X0)) \wedge (l1_orders_2 (k3_necklace X0))) \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_orders_2 X0) \Rightarrow (\forall X1.((v1_orders_2 X1) \wedge (l1_orders_2 X1)) \Rightarrow ((X1 = k3_necklace X0) \Leftrightarrow ((u1_struct_0 X1 = u1_struct_0 X0) \wedge (u1_orders_2 X1 = k7_subset_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0)) (k3_subset_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0)) (u1_orders_2 X0)) (k6_partfun1 (u1_struct_0 X0))))))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_orders_2 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow ((v2_dilworth X1 X0) \Leftrightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (((X2 \in X1) \wedge (X3 \in X1)) \Rightarrow ((X2 = X3) \vee ((\neg r1_orders_2 X0 X2 X3) \wedge (\neg r1_orders_2 X0 X3 X2)))))))))) \end{aligned} \quad (7)$$

Theorem 1

$$\begin{aligned} \forall X0.(l1_orders_2 X0) \Rightarrow (\forall X1.((v2_dilworth X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow ((v1_dilworth X1 (k3_necklace X0)) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 (k3_necklace X0)))))) \end{aligned}$$