

t17_waybel35
(TMdK9bAmAn6UFpnNcucDQYMvmEi2dyazunn)

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Let $v3_orders_2 : \iota \Rightarrow o$ be given. Let $v4_orders_2 : \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $v2_waybel_4 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $r1_orders_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_lattice7 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_waybel35 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $k3_waybel35 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $r3_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.\neg(X0 \in X1) \wedge ((m1_subset_1 X1 (k1_zfmisc_1 X2)) \wedge (v1_xboole_0 X2)) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (2)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0) \Rightarrow (\forall X1.\forall X2.\forall X3.(X2 \in k3_waybel35 X0 X1 X3) \Leftrightarrow ((k4_tarski X2 X3 \in X0) \wedge (X2 \in X1))) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge (l1_orders_2 X0))) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge (m1_subset_1 X2 (u1_struct_0 X0)))) \Rightarrow (r3_orders_2 X0 X1 X1) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge (l1_orders_2 X0))) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge (m1_subset_1 X2 (u1_struct_0 X0)))) \Rightarrow ((r3_orders_2 X0 X1 X2) \Leftrightarrow (r1_orders_2 X0 X1 X2)) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((l1_struct_0 X0)\wedge((m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0)))\wedge(m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0))))))\Rightarrow((r1_lattice7 X0 X1 X2)\Leftrightarrow(r1_tarski X1 X2)) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((l1_struct_0 X0)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0))))))\Rightarrow(k4_waybel35 X0 X1 X2 X3 = k3_waybel35 X1 X2 X3) \quad (7)$$

Assume the following.

$$\forall X0.((v2_struct_0 X0)\wedge(l1_struct_0 X0))\Rightarrow(v1_xboole_0 (u1_struct_0 X0)) \quad (8)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0)\Rightarrow(l1_struct_0 X0) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((l1_struct_0 X0)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0))))))\Rightarrow(m1_subset_1 (k4_waybel35 X0 X1 X2 X3) (k1_zfmisc_1 (u1_struct_0 X0))) \quad (10)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0))))\Rightarrow((v2_waybel_4 X1 X0)\Leftrightarrow(\forall X2.(m1_subset_1 X2 (u1_struct_0 X0))\Rightarrow(\forall X3.(m1_subset_1 X3 (u1_struct_0 X0))\Rightarrow(\forall X4.(m1_subset_1 X4 (u1_struct_0 X0))\Rightarrow(\forall X5.(m1_subset_1 X5 (u1_struct_0 X0))\Rightarrow(((r1_orders_2 X0 X5 X2)\wedge((k4_tarski X2 X3 \in X1)\wedge(r1_orders_2 X0 X3 X4))\Rightarrow(k4_tarski X5 X4 \in X1)))))))))) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.(r1_tarski X0 X1)\Leftrightarrow(\forall X2.(X2 \in X0)\Rightarrow(X2 \in X1)) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(v1_relat_1 X2) \quad (13)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge (l1_orders_2 \\ & X0))) \Rightarrow (\forall X1.((v2_waybel_4 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ & (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0)))))) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 \\ & (u1_struct_0 X0)) \Rightarrow ((r1_orders_2 X0 X3 X4) \Rightarrow (r1_lattice7 X0 (k4_waybel35 \\ & X0 X1 X2 X3) (k4_waybel35 X0 X1 X2 X4))))))) \end{aligned}$$