

t56_waybel_4

(TMKrv7LyWducaZHtrFKWXnZBKrMk8SSAgH4)

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Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $r5_waybel_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $u1_orders_2 : \iota \Rightarrow \iota$ be given. Let $r1_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $r4_waybel_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(k4_tarski\ X0\ X1 \in k2_zfmisc_1\ X2\ X3) \Leftrightarrow ((X0 \in X2) \wedge (X1 \in X3)) \quad (1)$$

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.

$$\forall X0.\forall X1.(m1_subset_1\ X0\ (k1_zfmisc_1\ X1)) \Leftrightarrow (r1_tarski\ X0\ X1) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.r1_tarski\ X0\ X0 \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.v1_relat_1\ (k2_zfmisc_1\ X0\ X1) \quad (5)$$

Assume the following.

$$\forall X0.(l1_orders_2\ X0) \Rightarrow (m1_subset_1\ (u1_orders_2\ X0)\ (k1_zfmisc_1\ (k2_zfmisc_1\ (u1_struct_0\ X0)\ (u1_struct_0\ X0)))) \quad (6)$$

Assume the following.

$$\forall X0.(l1_orders_2\ X0) \Rightarrow (\forall X1.(m1_subset_1\ X1\ (u1_struct_0\ X0)) \Rightarrow (\forall X2.(m1_subset_1\ X2\ (u1_struct_0\ X0)) \Rightarrow ((r2_orders_2\ X0\ X1\ X2) \Leftrightarrow ((r1_orders_2\ X0\ X1\ X2) \wedge (X1 \neq X2)))))) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.k4_tarSKI X0 X1 = k2_tarSKI (k2_tarSKI X0 X1) (k1_tarSKI X0) \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_orders_2 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow ((r1_orders_2 \\ X0 X1 X2) \Leftrightarrow (k4_tarSKI X1 X2 \in u1_orders_2 X0)))) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.(r1_tarSKI X0 X1) \Leftrightarrow (\forall X2.(X2 \in X0) \Rightarrow (X2 \in X1)) \quad (10)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_orders_2 X0) \Rightarrow (\forall X1.\forall X2.(m1_subset_1 \\ X2 (u1_struct_0 X0)) \Rightarrow ((r5_waybel_4 X0 X1 X2) \Leftrightarrow (r4_waybel_4 X1 X2 \\ (u1_orders_2 X0)))) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.(v1_relat_1 X2) \Rightarrow ((r4_waybel_4 \\ X0 X1 X2) \Leftrightarrow ((X1 \in X0) \wedge (\forall X3.\neg(X3 \in X0) \wedge ((X3 \neq X1) \wedge (k4_tarSKI \\ X3 X1 \in X2)))))) \end{aligned} \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.k2_tarSKI X0 X1 = k2_tarSKI X1 X0 \quad (13)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (v1_relat_1 X1)) \quad (14)$$

Theorem 1

$$\begin{aligned} \forall X0.(l1_orders_2 X0) \Rightarrow (\forall X1.\forall X2.(m1_subset_1 \\ X2 (u1_struct_0 X0)) \Rightarrow ((r5_waybel_4 X0 X1 X2) \Leftrightarrow ((X2 \in X1) \wedge (\forall X3. \\ (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\neg(X3 \in X1) \wedge (r2_orders_2 X0 \\ X3 X2)))))) \end{aligned}$$