

t36_waybel_0

(TMM7MsVwxSttXomDCqBQnZkXQNU6UetDyVm)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. 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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $r1_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_waybel_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_waybel_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v4_orders_2 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 \\ & (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow \\ & (((r1_orders_2 X0 X1 X2) \wedge (r1_orders_2 X0 X2 X3)) \Rightarrow (r1_orders_2 \\ & X0 X1 X3)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v3_orders_2 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow ((r1_tarski \\ & X1 (k3_waybel_0 X0 X1)) \wedge (r1_tarski X1 (k4_waybel_0 X0 X1)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (k4_waybel_0 \\ & X0 X1 = ReplSep (toset (\lambda X2 : \iota.m1_subset_1 X2 (u1_struct_0 \\ & X0)))) (\lambda X2 : \iota.\exists X3.(m1_subset_1 X3 (u1_struct_0 X0)) \wedge \\ & ((r1_orders_2 X0 X3 X2) \wedge (X3 \in X1))) (\lambda X2 : \iota.X2))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((l1_orders_2 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ & (u1_struct_0 X0)))) \Rightarrow (m1_subset_1 (k4_waybel_0 X0 X1) (k1_zfmisc_1 \\ & (u1_struct_0 X0))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_orders_2\ X0) \Rightarrow (\forall X1.\forall X2.(m1_subset_1 \\ X2\ (u1_struct_0\ X0)) \Rightarrow ((r1_lattice3\ X0\ X1\ X2) \Leftrightarrow (\forall X3.(m1_subset_1 \\ X3\ (u1_struct_0\ X0)) \Rightarrow ((X3 \in X1) \Rightarrow (r1_orders_2\ X0\ X2\ X3)))))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(r1_tarski\ X0\ X1) \Leftrightarrow (\forall X2.(X2 \in X0) \Rightarrow (X2 \in X1)) \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_orders_2\ X0) \Rightarrow (\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1 \\ (u1_struct_0\ X0))) \Rightarrow (\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1 \\ (u1_struct_0\ X0))) \Rightarrow ((X2 = k4_waybel_0\ X0\ X1) \Leftrightarrow (\forall X3.(m1_subset_1 \\ X3\ (u1_struct_0\ X0)) \Rightarrow ((X3 \in X2) \Leftrightarrow (\exists X4.(m1_subset_1\ X4\ (u1_struct_0 \\ X0)) \wedge (r1_orders_2\ X0\ X4\ X3) \wedge (X4 \in X1)))))))))) \end{aligned} \quad (7)$$

Theorem 1

$$\begin{aligned} \forall X0.((\neg v2_struct_0\ X0) \wedge (v3_orders_2\ X0) \wedge (v4_orders_2 \\ X0) \wedge (l1_orders_2\ X0)) \Rightarrow (\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1 \\ (u1_struct_0\ X0))) \Rightarrow (\forall X2.(m1_subset_1\ X2\ (u1_struct_0 \\ X0)) \Rightarrow ((r1_lattice3\ X0\ X1\ X2) \Leftrightarrow (r1_lattice3\ X0\ (k4_waybel_0\ X0\ X1 \\ X2)))))) \end{aligned}$$