

t41_waybel_2
(TMaaZp3hky4hFeeCMhDNhoFapq7LayuoRAD)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v3_orders_2 : \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $v1_waybel_2 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v7_waybel_0 : \iota \Rightarrow o$ be given. Let $l1_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v10_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k11_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_waybel_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_yellow_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_yellow_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_waybel_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $u1_waybel_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_yellow_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. \\ & ((\neg v2_struct_0 X1) \wedge (v7_waybel_0 X1) \wedge (l1_waybel_0 X1 X0))) \Rightarrow \\ & ((v10_waybel_0 X1 X0) \Rightarrow (v1_waybel_0 (k2_relset_1 (u1_struct_0 \\ & X0) (k1_waybel_0 X0 X1)) X0))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1 X1) \wedge (v5_relat_1 X1 X0)) \Rightarrow (k2_relset_1 X0 X1 = k10_xtuple_0 X1) \quad (2)$$

Assume the following.

$$\forall X0. ((\neg v1_xboole_0 X0) \wedge (v1_relat_1 X0)) \Rightarrow (\neg v1_xboole_0 (k10_xtuple_0 X0)) \quad (3)$$

Assume the following.

$$\forall X0. ((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\neg v1_xboole_0 (u1_struct_0 X0)) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((l1_struct_0 X0) \wedge (l1_waybel_0 X1 X0)) \Rightarrow \\ & ((v1_funct_1 (u1_waybel_0 X0 X1)) \wedge ((v1_funct_2 (u1_waybel_0 \\ & X0 X1) (u1_struct_0 X1) (u1_struct_0 X0)) \wedge (m1_subset_1 (u1_waybel_0 \\ & X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X1) (u1_struct_0 \\ & X0)))))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0. (l1_struct_0 X0) \Rightarrow (\forall X1. (l1_waybel_0 X1 X0) \Rightarrow (l1_orders_2 X1)) \quad (6)$$

Assume the following.

$$\forall X0. (l1_orders_2 X0) \Rightarrow (l1_struct_0 X0) \quad (7)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1 X1) \wedge (v5_relat_1 X1 X0)) \Rightarrow (m1_subset_1 (k2_relset_1 X0 X1) (k1_zfmisc_1 X0)) \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\forall X1. \\ & ((\neg v2_struct_0 X1) \wedge (l1_waybel_0 X1 X0)) \Rightarrow (k1_waybel_0 X0 X1 = u1_waybel_0 \\ & X0 X1)) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge (l1_orders_2 \\ & X0))) \Rightarrow ((v1_waybel_2 X0) \Leftrightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X2. ((\neg v1_xboole_0 X2) \wedge ((v1_waybel_0 X2 X0) \wedge (m1_subset_1 \\ & X2 (k1_zfmisc_1 (u1_struct_0 X0)))))) \Rightarrow (k11_lattice3 X0 X1 (k1_yellow_0 \\ & X0 X2) = k1_yellow_0 X0 (k3_yellow_4 X0 (k6_domain_1 (u1_struct_0 \\ & X0) X1) X2)))) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. \\ & (v1_relat_1 X1) \Rightarrow (k4_yellow_2 X0 X1 = k1_yellow_0 X0 (k10_xtuple_0 \\ & X1))) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. \\ & (l1_waybel_0 X1 X0) \Rightarrow (k1_waybel_2 X0 X1 = k4_yellow_2 X0 (u1_waybel_0 \\ & X0 X1))) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge(\neg v1_xboole_0 X1))\Rightarrow \\ & (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow \\ & (((v1_funct_1 X2)\wedge(v1_funct_2 X2 X0 X1))\Rightarrow((v1_funct_1 X2)\wedge((\\ & \neg v1_xboole_0 X2)\wedge(v1_funct_2 X2 X0 X1)))))) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1)))\Rightarrow((v4_relat_1 X2 X0)\wedge(v5_relat_1 X2 X1)) \end{aligned} \quad (14)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1)))\Rightarrow(v1_relat_1 X2) \end{aligned} \quad (15)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge((v3_orders_2 X0)\wedge(l1_orders_2 \\ & X0)))\Rightarrow((v1_waybel_2 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ & X0))\Rightarrow(\forall X2.((\neg v2_struct_0 X2)\wedge((v7_waybel_0 X2)\wedge(l1_waybel_0 \\ & X2 X0)))\Rightarrow((v10_waybel_0 X2 X0)\Rightarrow(k11_lattice3 X0 X1 (k1_waybel_2 \\ & X0 X2) = k1_yellow_0 X0 (k3_yellow_4 X0 (k6_domain_1 (u1_struct_0 \\ & X0) X1) (k2_relset_1 (u1_struct_0 X0) (k1_waybel_0 X0 X2)))))))))) \end{aligned}$$