

t35_waybel1

(TMYqNnW9oytJactBUXBZhNqtfef2KgXEojA)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $v4_orders_2 : \iota \Rightarrow o$ be given. Let $v7_waybel_0 : \iota \Rightarrow o$ be given. Let $l1_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_yellow_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_yellow_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k2_waybel_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_waybel_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $v6_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_yellow_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $m1_yellow_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_yellow_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((v1_relat_1 X2) \wedge (v1_funct_1 \\ & X2)) \Rightarrow ((X0 \in X1) \Rightarrow (k1_funct_1 (k5_relat_1 X2 X1) X0 = k1_funct_1 X2 \\ & X0)) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee \\ & (X0 \in X1)) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. (m1_subset_1 X2 (\\ & k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (k8_relset_1 X0 X1 X2 X3 = k8_relat_1 \\ & X2 X3) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0 X0)\wedge \\ & (((v1_funct_1 X2)\wedge((v1_funct_2 X2 X0 X1)\wedge(m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1))))))\wedge(m1_subset_1 X3 X0)))\Rightarrow(k3_funct_2 X0 \\ & X1 X2 X3 = k1_funct_1 X2 X3) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((v1_funct_1 X2)\wedge \\ & (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))\Rightarrow(k2_partfun1 \\ & X0 X1 X2 X3 = k5_relat_1 X2 X3) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge(l1_struct_0 X0))\Rightarrow(\neg v1_xboole_0 \\ & (u1_struct_0 X0)) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((l1_struct_0 X0)\wedge(l1_waybel_0 X1 X0))\Rightarrow \\ & ((v1_funct_1 (u1_waybel_0 X0 X1))\wedge((v1_funct_2 (u1_waybel_0 \\ & X0 X1) (u1_struct_0 X1) (u1_struct_0 X0))\wedge(m1_subset_1 (u1_waybel_0 \\ & X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X1) (u1_struct_0 \\ & X0)))))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(((\neg v2_struct_0 X0)\wedge(l1_struct_0 X0))\wedge \\ & ((\neg v2_struct_0 X1)\wedge((v4_orders_2 X1)\wedge((v7_waybel_0 X1)\wedge(l1_waybel_0 \\ & X1 X0))))))\Rightarrow(\forall X2.(m2_yellow_6 X2 X0 X1)\Rightarrow((\neg v2_struct_0 \\ & X2)\wedge((v4_orders_2 X2)\wedge((v7_waybel_0 X2)\wedge(l1_waybel_0 X2 X0)))))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l1_struct_0 X0)\Rightarrow(\forall X1.(l1_waybel_0 X1 X0)\Rightarrow \\ & (l1_orders_2 X1)) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0)\Rightarrow(l1_struct_0 X0) \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((l1_struct_0 X0)\wedge(l1_waybel_0 \\ & X1 X0))\Rightarrow((v6_waybel_0 (k5_yellow_6 X0 X1 X2) X0)\wedge(m1_yellow_6 \\ & (k5_yellow_6 X0 X1 X2) X0 X1)) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\forall X1. \\ & ((\neg v2_struct_0 X1) \wedge (l1_waybel_0 X1 X0)) \Rightarrow (\forall X2.(m1_subset_1 \\ & X2 (u1_struct_0 X1)) \Rightarrow (k2_waybel_0 X0 X1 X2 = k3_funct_2 (u1_struct_0 \\ & X1) (u1_struct_0 X0) (u1_waybel_0 X0 X1) X2))) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1.\forall X2. \\ & (X2 = k8_relat_1 X0 X1) \Leftrightarrow (\forall X3.(X3 \in X2) \Leftrightarrow ((X3 \in k9_xtuple_0 \\ & X0) \wedge (k1_funct_1 X0 X3 \in X1)))) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l1_struct_0 X0) \Rightarrow (\forall X1.(l1_waybel_0 X1 X0) \Rightarrow \\ & (\forall X2.(l1_waybel_0 X2 X0) \Rightarrow ((m1_yellow_6 X2 X0 X1) \Leftrightarrow ((m1_yellow_0 \\ & X2 X1) \wedge (u1_waybel_0 X0 X2 = k2_partfun1 (u1_struct_0 X1) (u1_struct_0 \\ & X0) (u1_waybel_0 X0 X1) (u1_struct_0 X2)))))) \end{aligned} \quad (14)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l1_struct_0 X0) \Rightarrow (\forall X1.(l1_waybel_0 X1 X0) \Rightarrow \\ & (\forall X2.\forall X3.((v6_waybel_0 X3 X0) \wedge (m1_yellow_6 X3 X0 \\ & X1)) \Rightarrow ((X3 = k5_yellow_6 X0 X1 X2) \Leftrightarrow (((v4_yellow_0 X3 X1) \wedge (m1_yellow_0 \\ & X3 X1)) \wedge (u1_struct_0 X3 = k8_relset_1 (u1_struct_0 X1) (u1_struct_0 \\ & X0) (u1_waybel_0 X0 X1) X2)))))) \end{aligned} \quad (15)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1))) \Rightarrow (v1_relat_1 X2) \end{aligned} \quad (16)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\forall X1. \\ & ((\neg v2_struct_0 X1) \wedge ((v4_orders_2 X1) \wedge ((v7_waybel_0 X1) \wedge (l1_waybel_0 \\ & X1 X0)))) \Rightarrow (\forall X2.\forall X3.(m2_yellow_6 X3 X0 X1) \Rightarrow ((X3 = \\ & k5_yellow_6 X0 X1 X2) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 \\ & X3)) \Rightarrow (k2_waybel_0 X0 X3 X4 \in X2)))))) \end{aligned}$$