

t30_waybel12

(TMQQw2ZhnCphiwUmrFB9GrZi8muhtmoQan3)

October 27, 2020

Let $v3_orders_2 : \iota \Rightarrow o$ be given. Let $v4_orders_2 : \iota \Rightarrow o$ be given. Let $v5_orders_2 : \iota \Rightarrow o$ be given. Let $v2_lattice3 : \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v2_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v13_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $m1_waybel12 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r4_yellow_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_waybel_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k12_waybel_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $r2_yellow_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\ & X0) \wedge ((v2_lattice3 X0) \wedge (l1_orders_2 X0)))))) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow ((r1_tarski X1 (k4_waybel_0 \\ & X0 (k12_waybel_0 X0 X1))) \wedge (\forall X2.((\neg v1_xboole_0 X2) \wedge ((v2_waybel_0 \\ & X2 X0) \wedge ((v13_waybel_0 X2 X0) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 \\ & X0)))))) \Rightarrow ((r1_tarski X1 X2) \Rightarrow (r1_tarski (k4_waybel_0 X0 (k12_waybel_0 \\ & X0 X1)) X2)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v4_orders_2 X0) \wedge (l1_orders_2 \\ & X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\ & X0))) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 \\ & X0))) \Rightarrow ((r2_yellow_4 X0 X2 X1) \Rightarrow (r1_tarski (k4_waybel_0 X0 X1) (\\ & k4_waybel_0 X0 X2)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\ & X0) \wedge ((v2_lattice3 X0) \wedge (l1_orders_2 X0)))))) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\forall X2.((\neg v1_xboole_0 \\ & X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow ((r4_yellow_4 \\ & X0 X2 X1) \Rightarrow (r4_yellow_4 X0 (k12_waybel_0 X0 X2) (k12_waybel_0 X0 \\ & X1)))))) \end{aligned} \tag{3}$$

Assume the following.

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

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.((\neg v2_struct_0\ X0)\wedge((v3_orders_2 \\ X0)\wedge(l1_orders_2\ X0)))\wedge((m1_subset_1\ X1\ (k1_zfmisc_1\ (u1_struct_0 \\ X0)))\wedge(m1_subset_1\ X2\ (k1_zfmisc_1\ (u1_struct_0\ X0))))\Rightarrow((r4_yellow_4 \\ X0\ X1\ X2)\Leftrightarrow(r2_yellow_4\ X0\ X1\ X2)) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(((v3_orders_2\ X0)\wedge((v4_orders_2\ X0)\wedge \\ ((v5_orders_2\ X0)\wedge((v2_lattice3\ X0)\wedge(l1_orders_2\ X0))))\wedge(\\ (\neg v1_xboole_0\ X1)\wedge((v2_waybel_0\ X1\ X0)\wedge((v13_waybel_0\ X1\ X0)\wedge \\ (m1_subset_1\ X1\ (k1_zfmisc_1\ (u1_struct_0\ X0))))))\Rightarrow(\forall X2. \\ (m1_waybel12\ X2\ X0\ X1)\Rightarrow(m1_subset_1\ X2\ (k1_zfmisc_1\ (u1_struct_0 \\ X0)))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(((\neg v2_struct_0\ X0)\wedge(l1_orders_2\ X0))\wedge \\ (m1_subset_1\ X1\ (k1_zfmisc_1\ (u1_struct_0\ X0))))\Rightarrow(m1_subset_1 \\ (k12_waybel_0\ X0\ X1)\ (k1_zfmisc_1\ (u1_struct_0\ X0))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.((v3_orders_2\ X0)\wedge((v4_orders_2\ X0)\wedge((v5_orders_2 \\ X0)\wedge((v2_lattice3\ X0)\wedge(l1_orders_2\ X0))))\Rightarrow(\forall X1.((\neg \\ v1_xboole_0\ X1)\wedge((v2_waybel_0\ X1\ X0)\wedge((v13_waybel_0\ X1\ X0)\wedge(\\ m1_subset_1\ X1\ (k1_zfmisc_1\ (u1_struct_0\ X0))))))\Rightarrow(\forall X2. \\ (m1_subset_1\ X2\ (k1_zfmisc_1\ (u1_struct_0\ X0))\Rightarrow((m1_waybel12 \\ X2\ X0\ X1)\Leftrightarrow(X1 = k4_waybel_0\ X0\ (k12_waybel_0\ X0\ X2)))))) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.(X0 = X1)\Leftrightarrow((r1_tarski\ X0\ X1)\wedge(r1_tarski\ X1\ X0)) \quad (9)$$

Assume the following.

$$\forall X0.(l1_orders_2\ X0)\Rightarrow((v2_lattice3\ X0)\Rightarrow(\neg v2_struct_0\ X0)) \quad (10)$$

Theorem 1

$$\begin{aligned} \forall X0.((v3_orders_2\ X0)\wedge((v4_orders_2\ X0)\wedge((v5_orders_2 \\ X0)\wedge((v2_lattice3\ X0)\wedge(l1_orders_2\ X0))))\Rightarrow(\forall X1.((\neg \\ v1_xboole_0\ X1)\wedge((v2_waybel_0\ X1\ X0)\wedge((v13_waybel_0\ X1\ X0)\wedge(\\ m1_subset_1\ X1\ (k1_zfmisc_1\ (u1_struct_0\ X0))))))\Rightarrow(\forall X2. \\ (m1_waybel12\ X2\ X0\ X1)\Rightarrow(\forall X3.((\neg v1_xboole_0\ X3)\wedge(m1_subset_1 \\ X3\ (k1_zfmisc_1\ (u1_struct_0\ X0))))\Rightarrow(((r4_yellow_4\ X0\ X3\ X2)\wedge \\ (r4_yellow_4\ X0\ X1\ X3))\Rightarrow(m1_waybel12\ X3\ X0\ X1)))))) \end{aligned}$$