

t14_waybel27

(TMcHTaSXipMrhvoWfwfrctAKLPoL6d5MS9w)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k6_yellow_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_waybel27 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ 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 $r1_yellow_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_yellow_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v2_struct_0 X1) \wedge (l1_orders_2 X1)) \Rightarrow \\ & (\forall X2. ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 (u1_struct_0 \\ & X1)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 (u1_struct_0 \\ & X1)))))) \Rightarrow (\forall X3. ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 X0 (u1_struct_0 \\ & X1)) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 (u1_struct_0 \\ & X1)))))) \Rightarrow (\forall X4. (m1_subset_1 X4 (u1_struct_0 (k6_yellow_1 \\ & X0 X1))) \Rightarrow (\forall X5. (m1_subset_1 X5 (u1_struct_0 (k6_yellow_1 \\ & X0 X1)))) \Rightarrow (((X4 = X2) \wedge (X5 = X3)) \Rightarrow ((r1_orders_2 (k6_yellow_1 X0 X1) \\ & X4 X5) \Leftrightarrow (r1_yellow_2 X0 X1 X2 X3)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((\neg v1_xboole_0 X0) \wedge \\ & (((\neg v2_struct_0 X1) \wedge (l1_orders_2 X1)) \wedge ((m1_subset_1 X2 (u1_struct_0 \\ & (k6_yellow_1 X0 X1)) \wedge (m1_subset_1 X3 X0)))) \Rightarrow (k1_waybel27 X0 \\ & X1 X2 X3 = k1_funct_1 X2 X3) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((\neg v2_struct_0 X1)\wedge(l1_orders_2 X1))\Rightarrow \\ & (\forall X2.(m1_subset_1 X2 (u1_struct_0 (k6_yellow_1 X0 X1)))\Rightarrow \\ & ((X2 \in u1_struct_0 (k5_yellow_1 X0 (k7_funcop_1 X0 X1)))\wedge((v1_funct_1 \\ & X2)\wedge((v1_funct_2 X2 X0 (u1_struct_0 X1))\wedge(m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 (u1_struct_0 X1)))))))))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0 X0)\wedge \\ & (((\neg v2_struct_0 X1)\wedge(l1_orders_2 X1))\wedge((m1_subset_1 X2 (u1_struct_0 \\ & (k6_yellow_1 X0 X1)))\wedge(m1_subset_1 X3 X0))))\Rightarrow(m1_subset_1 (k1_waybel27 \\ & X0 X1 X2 X3) (u1_struct_0 X1)) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(l1_orders_2 X1)\Rightarrow(\forall X2.((v1_funct_1 \\ & X2)\wedge((v1_funct_2 X2 X0 (u1_struct_0 X1))\wedge(m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 (u1_struct_0 X1))))))\Rightarrow(\forall X3.((v1_funct_1 \\ & X3)\wedge((v1_funct_2 X3 X0 (u1_struct_0 X1))\wedge(m1_subset_1 X3 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 (u1_struct_0 X1))))))\Rightarrow((r1_yellow_2 X0 X1 X2 X3)\Leftrightarrow \\ & (\forall X4.\neg(X4 \in X0)\wedge(\forall X5.(m1_subset_1 X5 (u1_struct_0 \\ & X1))\Rightarrow(\forall X6.(m1_subset_1 X6 (u1_struct_0 X1))\Rightarrow(\neg(X5 = k1_funct_1 \\ & X2 X4)\wedge((X6 = k1_funct_1 X3 X4)\wedge(r1_orders_2 X1 X5 X6)))))))))) \end{aligned} \quad (7)$$

Theorem 1

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0)\Rightarrow(\forall X1.((\neg v2_struct_0 X1)\wedge \\ & (l1_orders_2 X1))\Rightarrow(\forall X2.(m1_subset_1 X2 (u1_struct_0 (\\ & k6_yellow_1 X0 X1)))\Rightarrow(\forall X3.(m1_subset_1 X3 (u1_struct_0 \\ & (k6_yellow_1 X0 X1)))\Rightarrow((r1_orders_2 (k6_yellow_1 X0 X1) X2 X3)\Leftrightarrow \\ & (\forall X4.(m1_subset_1 X4 X0)\Rightarrow(r1_orders_2 X1 (k1_waybel27 \\ & X0 X1 X2 X4) (k1_waybel27 X0 X1 X3 X4)))))) \end{aligned}$$