

t52_yellow_2
(TMda3fegd9y72i6HyFHSQHfFu4a1f3VkS1cP)

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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 $v5_orders_2 : \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $v5_orders_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_yellow_2 : \iota \Rightarrow \iota$ be given. Let $k2_yellow_1 : \iota \Rightarrow \iota$ be given. Let $k7_waybel_0 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $r3_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_waybel_0 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_orders_2 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 \\ (k2_yellow_1 X0))) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 \\ (k2_yellow_1 X0))) \Rightarrow ((r3_orders_2 (k2_yellow_1 X0) X1 X2) \Leftrightarrow (r1_tarski \\ X1 X2)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} \forall X0. ((\neg v2_struct_0 X0) \wedge ((v4_orders_2 X0) \wedge (l1_orders_2 \\ X0))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\ (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow ((r1_orders_2 X0 X1 X2) \Rightarrow (r1_tarski \\ (k5_waybel_0 X0 X1) (k5_waybel_0 X0 X2)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge (v3_orders_2 \\ X0) \wedge (l1_orders_2 X0)) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge \\ (m1_subset_1 X2 (u1_struct_0 X0)))) \Rightarrow ((r3_orders_2 X0 X1 X2) \Leftrightarrow (r1_orders_2 \\ X0 X1 X2)) \end{aligned} \tag{3}$$

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.

$$\begin{aligned} & \forall X0.\forall X1.(((\neg v2_struct_0 X0)\wedge((v3_orders_2 X0)\wedge \\ & (l1_orders_2 X0)))\wedge(m1_subset_1 X1 (u1_struct_0 X0)))\Rightarrow((\neg v1_xboole_0 \\ & (k5_waybel_0 X0 X1))\wedge(v1_waybel_0 (k5_waybel_0 X0 X1) X0)) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0)\Rightarrow((\neg v2_struct_0 (k2_yellow_1 X0))\wedge \\ & (v1_orders_2 (k2_yellow_1 X0))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_orders_2 (k2_yellow_1 X0))\wedge((v3_orders_2 (k2_yellow_1 \\ & X0))\wedge((v4_orders_2 (k2_yellow_1 X0))\wedge(v5_orders_2 (k2_yellow_1 \\ & X0)))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge((v3_orders_2 X0)\wedge((v4_orders_2 \\ & X0)\wedge(l1_orders_2 X0))))\Rightarrow(\neg v1_xboole_0 (k7_waybel_0 X0)) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0.\exists X1.m1_subset_1 X1 X0 \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(((\neg v2_struct_0 X0)\wedge(l1_orders_2 X0))\wedge \\ & (m1_subset_1 X1 (u1_struct_0 X0)))\Rightarrow(m1_subset_1 (k5_waybel_0 \\ & X0 X1) (k1_zfmisc_1 (u1_struct_0 X0))) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge((v3_orders_2 X0)\wedge((v4_orders_2 \\ & X0)\wedge((v5_orders_2 X0)\wedge(l1_orders_2 X0)))))\Rightarrow((v1_funct_1 (k3_yellow_2 \\ & X0))\wedge((v1_funct_2 (k3_yellow_2 X0) (u1_struct_0 X0) (u1_struct_0 \\ & (k2_yellow_1 (k7_waybel_0 X0)))))\wedge(m1_subset_1 (k3_yellow_2 \\ & X0) (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 (\\ & k2_yellow_1 (k7_waybel_0 X0)))))))) \end{aligned} \quad (11)$$

Assume the following.

$$\forall X0.(v1_orders_2 (k2_yellow_1 X0)) \wedge (l1_orders_2 (k2_yellow_1 X0)) \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l1_orders_2 X0) \Rightarrow (\forall X1.(l1_orders_2 X1) \Rightarrow (\forall X2. \\ & ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 \\ & X1)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\ & X0) (u1_struct_0 X1)))))) \Rightarrow ((v5_orders_3 X2 X0 X1) \Leftrightarrow (\forall X3. \\ & (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 \\ & (u1_struct_0 X0)) \Rightarrow ((r1_orders_2 X0 X3 X4) \Rightarrow (\forall X5.(m1_subset_1 \\ & X5 (u1_struct_0 X1)) \Rightarrow (\forall X6.(m1_subset_1 X6 (u1_struct_0 \\ & X1)) \Rightarrow (((X5 = k1_funct_1 X2 X3) \wedge (X6 = k1_funct_1 X2 X4)) \Rightarrow (r1_orders_2 \\ & X1 X5 X6)))))))))) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge ((v4_orders_2 \\ & X0) \wedge ((v5_orders_2 X0) \wedge (l1_orders_2 X0)))))) \Rightarrow (\forall X1.((v1_funct_1 \\ & X1) \wedge ((v1_funct_2 X1 (u1_struct_0 X0) (u1_struct_0 (k2_yellow_1 \\ & (k7_waybel_0 X0)))) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ & (u1_struct_0 X0) (u1_struct_0 (k2_yellow_1 (k7_waybel_0 X0))))))))) \Rightarrow \\ & ((X1 = k3_yellow_2 X0) \Leftrightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 \\ & X0)) \Rightarrow (k3_funct_2 (u1_struct_0 X0) (u1_struct_0 (k2_yellow_1 \\ & (k7_waybel_0 X0))) X1 X2 = k5_waybel_0 X0 X2))) \end{aligned} \quad (14)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (v1_xboole_0 X1)) \quad (15)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge ((v4_orders_2 \\ & X0) \wedge ((v5_orders_2 X0) \wedge (l1_orders_2 X0)))))) \Rightarrow (v5_orders_3 (k3_yellow_2 \\ & X0) X0 (k2_yellow_1 (k7_waybel_0 X0))) \end{aligned}$$