

t31_waybel_1 (TM YewpejDKX- pEpxwPs8vSQK98Mx8TgBXGDf)

October 27, 2020

Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ 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 $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v5_orders_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_waybel_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_yellow_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v4_yellow_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_yellow_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ 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 $v1_orders_2 : \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
& \forall X0.(l1_orders_2 X0) \Rightarrow (\forall X1.((v4_yellow_0 X1 X0) \wedge \\
& (m1_yellow_0 X1 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 \\
& X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\forall X4. \\
& (m1_subset_1 X4 (u1_struct_0 X1)) \Rightarrow (\forall X5.(m1_subset_1 X5 \\
& (u1_struct_0 X1)) \Rightarrow (((X4 = X2) \wedge ((X5 = X3) \wedge ((r1_orders_2 X0 X2 X3) \wedge \\
& (X4 \in u1_struct_0 X1)))) \Rightarrow (r1_orders_2 X1 X4 X5))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. \\
& ((\neg v2_struct_0 X1) \wedge (l1_orders_2 X1)) \Rightarrow (\forall X2.((v1_funct_1 \\
& X2) \wedge ((v1_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 X1)) \wedge (m1_subset_1 \\
& X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1)))))) \Rightarrow \\
& (r1_funct_2 (u1_struct_0 X0) (u1_struct_0 (k1_yellow_2 X0 X1 X2)) \\
& (u1_struct_0 X0) (u1_struct_0 X1) (k2_waybel_1 X0 X1 X2) X2)))
\end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5. \\ & ((\neg v1_xboole_0 X1)\wedge(\neg v1_xboole_0 X3)\wedge(((v1_funct_1 X4)\wedge((\\ & v1_funct_2 X4 X0 X1)\wedge(m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X1))))))\wedge((v1_funct_1 X5)\wedge((v1_funct_2 X5 X2 X3)\wedge(m1_subset_1 \\ & X5 (k1_zfmisc_1 (k2_zfmisc_1 X2 X3))))))\Rightarrow((r1_funct_2 X0 X1 \\ & X2 X3 X4 X5)\Leftrightarrow(X4 = X5)) \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0 X0)\wedge \\ & (((v1_funct_1 X2)\wedge((v1_funct_2 X2 X0 X1)\wedge(m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1))))))\wedge(m1_subset_1 X3 X0))\Rightarrow(k3_funct_2 X0 \\ & X1 X2 X3 = k1_funct_1 X2 X3) \end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0)\wedge(l1_orders_2 \\ & X0))\wedge(((\neg v2_struct_0 X1)\wedge(l1_orders_2 X1))\wedge((v1_funct_1 X2)\wedge \\ & ((v1_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 X1))\wedge(m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1))))))\Rightarrow \\ & ((\neg v2_struct_0 (k1_yellow_2 X0 X1 X2))\wedge((v1_orders_2 (k1_yellow_2 \\ & X0 X1 X2))\wedge(v4_yellow_0 (k1_yellow_2 X0 X1 X2) X1))) \end{aligned} \tag{6}$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0)\wedge(l1_struct_0 X0))\Rightarrow(\neg v1_xboole_0 (u1_struct_0 X0)) \tag{7}$$

Assume the following.

$$\forall X0.(l1_orders_2 X0)\Rightarrow(\forall X1.(m1_yellow_0 X1 X0)\Rightarrow (l1_orders_2 X1)) \tag{8}$$

Assume the following.

$$\forall X0.(l1_orders_2 X0)\Rightarrow(l1_struct_0 X0) \tag{9}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0 X0)\wedge \\ & (((v1_funct_1 X2)\wedge((v1_funct_2 X2 X0 X1)\wedge(m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1))))))\wedge(m1_subset_1 X3 X0))\Rightarrow(m1_subset_1 (\\ & k3_funct_2 X0 X1 X2 X3) X1) \end{aligned} \tag{10}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0)\wedge(l1_orders_2 \\
& X0))\wedge(((\neg v2_struct_0 X1)\wedge(l1_orders_2 X1))\wedge((v1_funct_1 X2)\wedge \\
& ((v1_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 X1))\wedge(m1_subset_1 \\
& X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1))))))\Rightarrow \\
& ((v1_funct_1 (k2_waybel_1 X0 X1 X2))\wedge((v1_funct_2 (k2_waybel_1 \\
& X0 X1 X2) (u1_struct_0 X0) (u1_struct_0 (k1_yellow_2 X0 X1 X2)))\wedge \\
& (m1_subset_1 (k2_waybel_1 X0 X1 X2) (k1_zfmisc_1 (k2_zfmisc_1 \\
& (u1_struct_0 X0) (u1_struct_0 (k1_yellow_2 X0 X1 X2))))))
\end{aligned} \tag{11}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0)\wedge(l1_orders_2 \\
& X0))\wedge(((\neg v2_struct_0 X1)\wedge(l1_orders_2 X1))\wedge((v1_funct_1 X2)\wedge \\
& ((v1_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 X1))\wedge(m1_subset_1 \\
& X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1))))))\Rightarrow \\
& ((v1_orders_2 (k1_yellow_2 X0 X1 X2))\wedge((v4_yellow_0 (k1_yellow_2 \\
& X0 X1 X2) X1)\wedge(m1_yellow_0 (k1_yellow_2 X0 X1 X2) X1)))
\end{aligned} \tag{12}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0)\wedge(l1_orders_2 X0))\Rightarrow(\forall X1. \\
& ((\neg v2_struct_0 X1)\wedge(l1_orders_2 X1))\Rightarrow(\forall X2.((v1_funct_1 \\
& X2)\wedge((v1_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 X1))\wedge(m1_subset_1 \\
& X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1))))))\Rightarrow \\
& ((v5_orders_3 X2 X0 X1)\Leftrightarrow(\forall X3.(m1_subset_1 X3 (u1_struct_0 \\
& X0))\Rightarrow(\forall X4.(m1_subset_1 X4 (u1_struct_0 X0))\Rightarrow((r1_orders_2 \\
& X0 X3 X4)\Rightarrow(r1_orders_2 X1 (k3_funct_2 (u1_struct_0 X0) (u1_struct_0 \\
& X1) X2 X3) (k3_funct_2 (u1_struct_0 X0) (u1_struct_0 X1) X2 X4))))))
\end{aligned} \tag{13}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0)\wedge(l1_orders_2 X0))\Rightarrow(\forall X1. \\
& ((\neg v2_struct_0 X1)\wedge(l1_orders_2 X1))\Rightarrow(\forall X2.((v1_funct_1 \\
& X2)\wedge((v1_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 X1))\wedge(m1_subset_1 \\
& X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1))))))\Rightarrow \\
& ((v5_orders_3 X2 X0 X1)\Rightarrow(v5_orders_3 (k2_waybel_1 X0 X1 X2) X0 (\\
& k1_yellow_2 X0 X1 X2))))
\end{aligned}$$