

t14_yellow14

(TMLu5pcoWksgp34dXVDYMP7ZQnfdBUmmhHt)

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Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $r5_waybel_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_yellow_0 : \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ 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 $v23_waybel_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_funct_1 : \iota \Rightarrow o$ be given. Let $k2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v5_orders_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k2_funct_1 : \iota \Rightarrow \iota$ be given. Let $v3_yellow_0 : \iota \Rightarrow o$ be given. Let $v2_yellow_0 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. \\
& ((\neg v2_struct_0 X1) \wedge (l1_orders_2 X1)) \Rightarrow (\forall X2.((v1_funct_1 \\
& X2) \wedge ((v1_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 X1)) \wedge (m1_subset_1 \\
& X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1)))))) \Rightarrow \\
& ((v23_waybel_0 X2 X0 X1) \Leftrightarrow ((v2_funct_1 X2) \wedge ((k2_relset_1 (u1_struct_0 \\
& X1) X2 = u1_struct_0 X1) \wedge (\forall X3.(m1_subset_1 X3 (u1_struct_0 \\
& X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow ((r1_orders_2 \\
& X0 X3 X4) \Leftrightarrow (r1_orders_2 X1 (k3_funct_2 (u1_struct_0 X0) (u1_struct_0 \\
& X1) X2 X3) (k3_funct_2 (u1_struct_0 X0) (u1_struct_0 X1) X2 X4))))))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. (m1_subset_1 X2 (k1_zfmisc_1 \\
& (k2_zfmisc_1 X0 X1))) \Rightarrow ((k7_relset_1 X0 X1 X2 X0 = k2_relset_1 X1 \\
& X2) \wedge (k8_relset_1 X0 X1 X2 X1 = k1_relset_1 X0 X2))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. \\
& ((\neg v2_struct_0 X1) \wedge (l1_orders_2 X1)) \Rightarrow (\forall X2.((v1_funct_1 \\
& X2) \wedge ((v1_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 X1)) \wedge (m1_subset_1 \\
& X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1)))))) \Rightarrow \\
& (\forall X3.(m1_subset_1 X3 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow \\
& (\forall X4.(m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow (((v5_orders_3 \\
& X2 X0 X1) \wedge (r1_lattice3 X0 X3 X4)) \Rightarrow (r1_lattice3 X1 (k7_relset_1 \\
& (u1_struct_0 X0) (u1_struct_0 X1) X2 X3) (k3_funct_2 (u1_struct_0 \\
& X0) (u1_struct_0 X1) X2 X4))))))
\end{aligned} \tag{3}$$

Assume the following.

$$\forall X0. \forall X1. ((l1_orders_2 X0) \wedge (l1_orders_2 X1)) \Rightarrow (r5_waybel_1 X0 X0) \tag{4}$$

Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1 X1) \wedge (v5_relat_1 X1 X0)) \Rightarrow (k2_relset_1 X0 X1 = k10_xtuple_0 X1) \tag{5}$$

Assume the following.

$$\forall X0. ((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\neg v1_xboole_0 (u1_struct_0 X0)) \tag{6}$$

Assume the following.

$$\forall X0. (l1_orders_2 X0) \Rightarrow (l1_struct_0 X0) \tag{7}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. \forall X3. ((\neg v1_xboole_0 X0) \wedge \\
& (((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\
& (k2_zfmisc_1 X0 X1)))))) \wedge (m1_subset_1 X3 X0)) \Rightarrow (m1_subset_1 (\\
& k3_funct_2 X0 X1 X2 X3) X1)
\end{aligned} \tag{8}$$

Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1 X1) \wedge (v5_relat_1 X1 X0)) \Rightarrow (m1_subset_1 (k2_relset_1 X0 X1) (k1_zfmisc_1 X0)) \tag{9}$$

Assume the following.

$$\begin{aligned}
& \forall X0. (l1_orders_2 X0) \Rightarrow (\forall X1. (l1_orders_2 X1) \Rightarrow ((\\
& r5_waybel_1 X0 X1) \Leftrightarrow (\exists X2. ((v1_funct_1 X2) \wedge ((v1_funct_2 \\
& X2 (u1_struct_0 X0) (u1_struct_0 X1)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\
& (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1)))))) \wedge (v23_waybel_0 \\
& X2 X0 X1)))
\end{aligned} \tag{10}$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow ((v1_yellow_0 X0) \Leftrightarrow (\exists X1.(m1_subset_1 X1 (u1_struct_0 X0)) \wedge (r1_lattice3 X0 (u1_struct_0 X0) X1))) \quad (11)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_orders_2 X0) \Rightarrow (\forall X1.(l1_orders_2 X1) \Rightarrow (\forall X2. & \\ ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 & \\ X1)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 & \\ X0) (u1_struct_0 X1)))))) \Rightarrow ((\neg(\neg v2_struct_0 X0) \wedge (\neg v2_struct_0 & \\ X1) \wedge (\neg(v23_waybel_0 X2 X0 X1) \Leftrightarrow ((v2_funct_1 X2) \wedge ((v5_orders_3 & \\ X2 X0 X1) \wedge (\exists X3.((v1_funct_1 X3) \wedge ((v1_funct_2 X3 (u1_struct_0 & \\ X1) (u1_struct_0 X0)) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 & \\ (u1_struct_0 X1) (u1_struct_0 X0)))))) \wedge ((X3 = k2_funct_1 X2) \wedge & \\ (v5_orders_3 X3 X1 X0)))))) \wedge ((\neg(\neg v2_struct_0 X0) \wedge (\neg v2_struct_0 & \\ X1)) \Rightarrow ((v23_waybel_0 X2 X0 X1) \Leftrightarrow ((v2_struct_0 X0) \wedge (v2_struct_0 & \\ X1))))))))) \quad (12) \end{aligned}$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow ((v3_yellow_0 X0) \Rightarrow ((v1_yellow_0 X0) \wedge (v2_yellow_0 X0))) \quad (13)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow ((v2_struct_0 X0) \Rightarrow (v3_yellow_0 X0)) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow ((v4_relat_1 X2 X0) \wedge (v5_relat_1 X2 X1)) \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (v1_relat_1 X2) \quad (16)$$

Theorem 1

$$\forall X0.(l1_orders_2 X0) \Rightarrow (\forall X1.(l1_orders_2 X1) \Rightarrow ((r5_waybel_1 X0 X1) \wedge (v1_yellow_0 X0) \Rightarrow (v1_yellow_0 X1)))$$