

l5_waybel34

(TMMNo1Sxuf1PtXbBNvqiSKfhXHdCJ85NkNT)

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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 $v1_lattice3 : \iota \Rightarrow o$ be given. Let $v2_lattice3 : \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $v3_lattice3 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow o$ 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 $v18_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5_orders_3 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_waybel34 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v4_waybel_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v17_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v3_waybel_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_waybel_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r3_waybel_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_waybel_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge ((v4_orders_2 \\
 & \quad X0) \wedge ((v5_orders_2 X0) \wedge (l1_orders_2 X0)))))) \Rightarrow (\forall X1. ((\neg \\
 & v2_struct_0 X1) \wedge ((v3_orders_2 X1) \wedge ((v4_orders_2 X1) \wedge ((v5_orders_2 \\
 & \quad X1) \wedge (l1_orders_2 X1)))))) \Rightarrow (\forall X2. ((v1_funct_1 X2) \wedge ((v1_funct_2 \\
 & X2 (u1_struct_0 X0) (u1_struct_0 X1)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\
 & \quad (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1)))))) \Rightarrow (\forall X3. \\
 & ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 (u1_struct_0 X1) (u1_struct_0 \\
 & \quad X0)) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\
 & \quad X1) (u1_struct_0 X0)))))) \Rightarrow ((v3_waybel_1 (k1_waybel_1 X0 X1 X2 \\
 & \quad X3) X0 X1) \Leftrightarrow ((v5_orders_3 X2 X0 X1) \wedge (\forall X4. (m1_subset_1 X4 \\
 & \quad (u1_struct_0 X1)) \Rightarrow (r3_waybel_1 X0 (k3_funct_2 (u1_struct_0 X1) \\
 & \quad (u1_struct_0 X0) X3 X4) (k8_relset_1 (u1_struct_0 X0) (u1_struct_0 \\
 & \quad \quad X1) X2 (k6_waybel_0 X1 X4))))))))))
 \end{aligned}
 \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. (((v3_orders_2 X0) \wedge ((v4_orders_2 \\
& X0) \wedge ((v5_orders_2 X0) \wedge ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge \\
& (l1_orders_2 X0)))))) \wedge (((v3_orders_2 X1) \wedge ((v4_orders_2 X1) \wedge \\
& ((v5_orders_2 X1) \wedge ((v1_lattice3 X1) \wedge ((v2_lattice3 X1) \wedge (l1_orders_2 \\
& X1)))))) \wedge ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 (u1_struct_0 X1) (\\
& u1_struct_0 X0)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (\\
& u1_struct_0 X1) (u1_struct_0 X0))))))) \Rightarrow ((v1_funct_1 (k2_waybel34 \\
& X0 X1 X2)) \wedge ((v1_funct_2 (k2_waybel34 X0 X1 X2) (u1_struct_0 X0) \\
& (u1_struct_0 X1)) \wedge (m1_subset_1 (k2_waybel34 X0 X1 X2) (k1_zfmisc_1 \\
& (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1))))))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0. (((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\
& X0) \wedge ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge (l1_orders_2 X0)))))) \Rightarrow \\
& (\forall X1. (((v3_orders_2 X1) \wedge ((v4_orders_2 X1) \wedge ((v5_orders_2 \\
& X1) \wedge ((v1_lattice3 X1) \wedge ((v2_lattice3 X1) \wedge (l1_orders_2 X1)))))) \Rightarrow \\
& (\forall X2. (((v1_funct_1 X2) \wedge ((v1_funct_2 X2 (u1_struct_0 X1) \\
& (u1_struct_0 X0)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\
& (u1_struct_0 X1) (u1_struct_0 X0)))))) \Rightarrow (((v3_lattice3 X1) \wedge \\
& v18_waybel_0 X2 X1 X0)) \Rightarrow (\forall X3. ((v1_funct_1 X3) \wedge ((v1_funct_2 \\
& X3 (u1_struct_0 X0) (u1_struct_0 X1)) \wedge (m1_subset_1 X3 (k1_zfmisc_1 \\
& (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1)))))) \Rightarrow ((X3 = k2_waybel34 \\
& X0 X1 X2) \Leftrightarrow (v3_waybel_1 (k1_waybel_1 X0 X1 X3 X2) X0 X1))))))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0. ((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. \\
& ((\neg v2_struct_0 X1) \wedge (l1_orders_2 X1)) \Rightarrow (\forall X2. ((v1_funct_1 \\
& X2) \wedge ((v1_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 X1)) \wedge (m1_subset_1 \\
& X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1)))))) \Rightarrow \\
& ((v4_waybel_1 X2 X0 X1) \Leftrightarrow (\exists X3. ((v1_funct_1 X3) \wedge ((v1_funct_2 \\
& X3 (u1_struct_0 X1) (u1_struct_0 X0)) \wedge (m1_subset_1 X3 (k1_zfmisc_1 \\
& (k2_zfmisc_1 (u1_struct_0 X1) (u1_struct_0 X0)))))) \wedge (v3_waybel_1 \\
& (k1_waybel_1 X0 X1 X2 X3) X0 X1))))))
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge \\
& \quad ((v4_orders_2 X0) \wedge ((v5_orders_2 X0) \wedge (l1_orders_2 X0)))))) \wedge (\\
& (\neg v2_struct_0 X1) \wedge ((v3_orders_2 X1) \wedge ((v4_orders_2 X1) \wedge ((v5_orders_2 \\
& \quad X1) \wedge (l1_orders_2 X1)))))) \Rightarrow (\forall X2. (m1_subset_1 X2 (k1_zfmisc_1 \\
& \quad (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1)))) \Rightarrow (((v1_funct_1 \\
& X2) \wedge ((v1_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 X1)) \wedge (v4_waybel_1 \\
& \quad X2 X0 X1))) \Rightarrow ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 (u1_struct_0 X0) \\
& \quad (u1_struct_0 X1)) \wedge (v17_waybel_0 X2 X0 X1))))))
\end{aligned} \tag{5}$$

Assume the following.

$$\forall X0. (l1_orders_2 X0) \Rightarrow ((v1_lattice3 X0) \Rightarrow (\neg v2_struct_0 X0)) \tag{6}$$

Theorem 1

$$\begin{aligned}
& \forall X0. ((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\
& X0) \wedge ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge (l1_orders_2 X0)))))) \Rightarrow \\
& (\forall X1. ((v3_orders_2 X1) \wedge ((v4_orders_2 X1) \wedge ((v5_orders_2 \\
& X1) \wedge ((v1_lattice3 X1) \wedge ((v2_lattice3 X1) \wedge (l1_orders_2 X1)))))) \Rightarrow \\
& (((v3_lattice3 X0) \wedge (v3_lattice3 X1)) \Rightarrow (\forall X2. ((v1_funct_1 \\
& X2) \wedge ((v1_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 X1)) \wedge (m1_subset_1 \\
& X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1)))))) \Rightarrow \\
& ((v18_waybel_0 X2 X0 X1) \Rightarrow ((v5_orders_3 (k2_waybel34 X1 X0 X2) X1 \\
& X0) \wedge ((v4_waybel_1 (k2_waybel34 X1 X0 X2) X1 X0) \wedge (v17_waybel_0 \\
& \quad (k2_waybel34 X1 X0 X2) X1 X0))))))
\end{aligned}$$