

t67_waybel34

(TMQqMTff91FC7mzw5jaTiLnEN4NvW5Hwzpd)

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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 $v3_lattice3 : \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $v2_waybel_8 : \iota \Rightarrow o$ 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 $v17_waybel_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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 $v22_waybel_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_waybel34 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_waybel_8 : \iota \Rightarrow \iota$ be given. Let $v4_waybel34 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v18_waybel_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_waybel34 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_waybel34 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_waybel_3 : \iota \Rightarrow o$ be given. Let $v5_orders_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5_waybel_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\
 & X0) \wedge ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge ((v3_lattice3 X0) \wedge \\
 & (l1_orders_2 X0)))))) \Rightarrow (\forall X1.((v3_orders_2 X1) \wedge ((v4_orders_2 \\
 & X1) \wedge ((v5_orders_2 X1) \wedge ((v1_lattice3 X1) \wedge ((v2_lattice3 X1) \wedge \\
 & ((v3_lattice3 X1) \wedge (l1_orders_2 X1)))))) \Rightarrow (\forall X2.((v1_funct_1 \\
 & X2) \wedge ((v1_funct_2 X2 (u1_struct_0 X1) (u1_struct_0 X0)) \wedge ((v18_waybel_0 \\
 & X2 X1 X0) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\
 & X1) (u1_struct_0 X0)))))) \Rightarrow ((v3_waybel34 X2 X1 X0) \Leftrightarrow ((v1_funct_1 \\
 & (k2_partfun1 (u1_struct_0 X1) (u1_struct_0 X0) X2 (u1_struct_0 \\
 & (k1_waybel_8 X1)))) \wedge ((v1_funct_2 (k2_partfun1 (u1_struct_0 \\
 & X1) (u1_struct_0 X0) X2 (u1_struct_0 (k1_waybel_8 X1))) (u1_struct_0 \\
 & (k1_waybel_8 X1)) (u1_struct_0 (k1_waybel_8 X0))) \wedge ((v4_waybel34 \\
 & (k2_partfun1 (u1_struct_0 X1) (u1_struct_0 X0) X2 (u1_struct_0 \\
 & (k1_waybel_8 X1))) (k1_waybel_8 X1) (k1_waybel_8 X0)) \wedge (m1_subset_1 \\
 & (k2_partfun1 (u1_struct_0 X1) (u1_struct_0 X0) X2 (u1_struct_0 \\
 & (k1_waybel_8 X1))) (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 (k1_waybel_8 \\
 & X1)) (u1_struct_0 (k1_waybel_8 X0))))))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\
& X0) \wedge ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge ((v3_lattice3 X0) \wedge \\
& (l1_orders_2 X0)))))) \Rightarrow (\forall X1.((v3_orders_2 X1) \wedge ((v4_orders_2 \\
& X1) \wedge ((v5_orders_2 X1) \wedge ((v1_lattice3 X1) \wedge ((v2_lattice3 X1) \wedge \\
& ((v3_lattice3 X1) \wedge (l1_orders_2 X1)))))) \Rightarrow (\forall X2.((v1_funct_1 \\
& X2) \wedge ((v1_funct_2 X2 (u1_struct_0 X1) (u1_struct_0 X0)) \wedge ((v18_waybel_0 \\
& X2 X1 X0) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\
& X1) (u1_struct_0 X0)))))) \Rightarrow (((v2_waybel_8 X1) \wedge (v3_waybel34 \\
& X2 X1 X0)) \Rightarrow (v1_waybel34 X2 X1 X0)))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\
& X0) \wedge ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge ((v3_lattice3 X0) \wedge \\
& (l1_orders_2 X0)))))) \Rightarrow (\forall X1.((v3_orders_2 X1) \wedge ((v4_orders_2 \\
& X1) \wedge ((v5_orders_2 X1) \wedge ((v1_lattice3 X1) \wedge ((v2_lattice3 X1) \wedge \\
& ((v3_lattice3 X1) \wedge (l1_orders_2 X1)))))) \Rightarrow (\forall X2.((v1_funct_1 \\
& X2) \wedge ((v1_funct_2 X2 (u1_struct_0 X1) (u1_struct_0 X0)) \wedge ((v18_waybel_0 \\
& X2 X1 X0) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\
& X1) (u1_struct_0 X0)))))) \Rightarrow ((v1_waybel34 X2 X1 X0) \Rightarrow (v3_waybel34 \\
& X2 X1 X0)))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\
& X0) \wedge ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge ((v3_lattice3 X0) \wedge \\
& (l1_orders_2 X0)))))) \Rightarrow (\forall X1.((v3_orders_2 X1) \wedge ((v4_orders_2 \\
& X1) \wedge ((v5_orders_2 X1) \wedge ((v3_waybel_3 X1) \wedge ((v1_lattice3 X1) \wedge \\
& ((v2_lattice3 X1) \wedge ((v3_lattice3 X1) \wedge (l1_orders_2 X1)))))) \Rightarrow \\
& (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 X2 (u1_struct_0 X0) \\
& (u1_struct_0 X1)) \wedge ((v17_waybel_0 X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\
& (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1)))))) \Rightarrow ((v1_waybel34 \\
& (k1_waybel34 X0 X1 X2) X1 X0) \Rightarrow (v22_waybel_0 X2 X0 X1)))
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\
& X0) \wedge ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge ((v3_lattice3 X0) \wedge \\
& (l1_orders_2 X0)))))) \Rightarrow (\forall X1.((v3_orders_2 X1) \wedge ((v4_orders_2 \\
& X1) \wedge ((v5_orders_2 X1) \wedge ((v1_lattice3 X1) \wedge ((v2_lattice3 X1) \wedge \\
& ((v3_lattice3 X1) \wedge (l1_orders_2 X1)))))) \Rightarrow (\forall X2.((v1_funct_1 \\
& X2) \wedge ((v1_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 X1)) \wedge ((v17_waybel_0 \\
& X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\
& X0) (u1_struct_0 X1)))))) \Rightarrow ((v22_waybel_0 X2 X0 X1) \Rightarrow (v1_waybel34 \\
& (k1_waybel34 X0 X1 X2) X1 X0)))
\end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\
& X0) \wedge ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge (l1_orders_2 X0)))))) \Rightarrow \\
& (\forall X1.((v3_orders_2 X1) \wedge ((v4_orders_2 X1) \wedge ((v5_orders_2 \\
& X1) \wedge ((v1_lattice3 X1) \wedge ((v2_lattice3 X1) \wedge (l1_orders_2 X1)))))) \Rightarrow \\
& (((v3_lattice3 X0) \wedge (v3_lattice3 X1)) \Rightarrow (\forall X2.((v1_funct_1 \\
& X2) \wedge ((v1_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 X1)) \wedge (m1_subset_1 \\
& X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1)))))) \Rightarrow \\
& ((v17_waybel_0 X2 X0 X1) \Rightarrow ((v5_orders_3 (k1_waybel34 X0 X1 X2) X1 \\
& X0) \wedge ((v5_waybel_1 (k1_waybel34 X0 X1 X2) X0 X1) \wedge (v18_waybel_0 \\
& (k1_waybel34 X0 X1 X2) X1 X0))))))
\end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. (((v3_orders_2 X0) \wedge ((v4_orders_2 \\
& X0) \wedge ((v5_orders_2 X0) \wedge ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge \\
& (l1_orders_2 X0)))))) \wedge (((v3_orders_2 X1) \wedge ((v4_orders_2 X1) \wedge \\
& ((v5_orders_2 X1) \wedge ((v1_lattice3 X1) \wedge ((v2_lattice3 X1) \wedge (l1_orders_2 \\
& X1)))))) \wedge ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 (u1_struct_0 X0) (\\
& u1_struct_0 X1)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (\\
& u1_struct_0 X0) (u1_struct_0 X1)))))) \Rightarrow ((v1_funct_1 (k1_waybel34 \\
& X0 X1 X2)) \wedge ((v1_funct_2 (k1_waybel34 X0 X1 X2) (u1_struct_0 X1) \\
& (u1_struct_0 X0)) \wedge (m1_subset_1 (k1_waybel34 X0 X1 X2) (k1_zfmisc_1 \\
& (k2_zfmisc_1 (u1_struct_0 X1) (u1_struct_0 X0))))))
\end{aligned} \tag{7}$$

Assume the following.

$$\begin{aligned}
& \forall X0. (l1_orders_2 X0) \Rightarrow (((v3_orders_2 X0) \wedge ((v4_orders_2 \\
& X0) \wedge ((v5_orders_2 X0) \wedge ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge \\
& (v2_waybel_8 X0)))))) \Rightarrow ((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge \\
& ((v5_orders_2 X0) \wedge ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge (v3_waybel_3 \\
& X0))))))
\end{aligned} \tag{8}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\
& X0) \wedge ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge ((v3_lattice3 X0) \wedge \\
& (l1_orders_2 X0)))))) \Rightarrow (\forall X1.((v3_orders_2 X1) \wedge ((v4_orders_2 \\
& X1) \wedge ((v5_orders_2 X1) \wedge ((v1_lattice3 X1) \wedge ((v2_lattice3 X1) \wedge \\
& ((v3_lattice3 X1) \wedge (l1_orders_2 X1)))))) \Rightarrow ((v2_waybel_8 X1) \Rightarrow \\
& (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 X2 (u1_struct_0 X0) \\
& (u1_struct_0 X1)) \wedge ((v17_waybel_0 X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\
& (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1)))))) \Rightarrow ((v22_waybel_0 \\
& X2 X0 X1) \Leftrightarrow ((v1_funct_1 (k2_partfun1 (u1_struct_0 X1) (u1_struct_0 \\
& X0) (k1_waybel34 X0 X1 X2) (u1_struct_0 (k1_waybel_8 X1)))) \wedge ((\\
& v1_funct_2 (k2_partfun1 (u1_struct_0 X1) (u1_struct_0 X0) (k1_waybel34 \\
& X0 X1 X2) (u1_struct_0 (k1_waybel_8 X1))) (u1_struct_0 (k1_waybel_8 \\
& X1)) (u1_struct_0 (k1_waybel_8 X0))) \wedge ((v4_waybel34 (k2_partfun1 \\
& (u1_struct_0 X1) (u1_struct_0 X0) (k1_waybel34 X0 X1 X2) (u1_struct_0 \\
& (k1_waybel_8 X1))) (k1_waybel_8 X1) (k1_waybel_8 X0)) \wedge (m1_subset_1 \\
& (k2_partfun1 (u1_struct_0 X1) (u1_struct_0 X0) (k1_waybel34 X0 \\
& X1 X2) (u1_struct_0 (k1_waybel_8 X1))) (k1_zfmisc_1 (k2_zfmisc_1 \\
& (u1_struct_0 (k1_waybel_8 X1)) (u1_struct_0 (k1_waybel_8 X0))))))))))
\end{aligned}$$