

t8_waybel35 (TMNDFWXBeT- MyCU1DkPnv5rcFKWNXPTDpgSu)

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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 $v1_waybel.4 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_waybel.4 : \iota \Rightarrow \iota \Rightarrow o$ 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 $u1_struct.0 : \iota \Rightarrow \iota$ be given. Let $v1_xboole.0 : \iota \Rightarrow o$ be given. Let $m1_waybel35 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_yellow.0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_waybel35 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_yellow.0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_yellow.0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_orders.2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r3_orders.2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2_orders.2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_domain.1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_orders.2 : \iota \Rightarrow o$ 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 $l1_struct.0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct.0 X0) \wedge ((v4_orders.2 X0) \wedge (l1_orders.2 \\ & X0))) \Rightarrow (\forall X1.((\neg v1_xboole.0 X1) \wedge (m1_subset.1 X1 (k1_zfmisc.1 \\ & (u1_struct.0 X0)))) \Rightarrow (\forall X2.(m1_subset.1 X2 (k1_zfmisc.1 \\ & X1)) \Rightarrow (((r1_yellow.0 X0 X2) \wedge (k1_yellow.0 X0 X2 \in X1)) \Rightarrow ((r1_yellow.0 \\ & (k5_yellow.0 X0 X1) X2) \wedge (k1_yellow.0 X0 X2 = k1_yellow.0 (k5_yellow.0 \\ & X0 X1) X2)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v5_orders.2 X0) \wedge (l1_orders.2 X0)) \Rightarrow (\forall X1. \\ & (r1_yellow.0 X0 X1) \Leftrightarrow (\exists X2.(m1_subset.1 X2 (u1_struct.0 \\ & X0)) \wedge ((r2_lattice3 X0 X1 X2) \wedge (\forall X3.(m1_subset.1 X3 (u1_struct.0 \\ & X0)) \Rightarrow ((r2_lattice3 X0 X1 X3) \Rightarrow (r1_orders.2 X0 X2 X3)))))) \end{aligned} \tag{2}$$

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.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge ((v4_orders_2 \\
& X0) \wedge ((v5_orders_2 X0) \wedge (l1_orders_2 X0)))))) \Rightarrow (\forall X1.((v1_waybel_4 \\
& X1 X0) \wedge ((v2_waybel_4 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\
& (u1_struct_0 X0) (u1_struct_0 X0)))))) \Rightarrow (\forall X2.((\neg v1_xboole_0 \\
& X2) \wedge (m1_waybel35 X2 X0 X1)) \Rightarrow (\forall X3.(m1_subset_1 X3 (k1_zfmisc_1 \\
& X2)) \Rightarrow (\neg (r1_yellow_0 X0 X3) \wedge ((v2_waybel35 X2 X0 X1) \wedge ((\neg k1_yellow_0 \\
& X0 X3 \in X2) \wedge (\forall X4.(m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow (\neg (X4 \in \\
& X2) \wedge ((r2_orders_2 X0 (k1_yellow_0 X0 X3) X4) \wedge ((\neg k1_domain_1 (\\
& u1_struct_0 X0) (u1_struct_0 X0) (k1_yellow_0 X0 X3) X4 \in X1) \wedge (\exists X5. \\
& (m1_subset_1 X5 (u1_struct_0 (k5_yellow_0 X0 X2))) \wedge ((X4 = X5) \wedge \\
& ((r2_lattice3 (k5_yellow_0 X0 X2) X3 X5) \wedge (\forall X6.(m1_subset_1 \\
& X6 (u1_struct_0 (k5_yellow_0 X0 X2))) \Rightarrow ((r2_lattice3 (k5_yellow_0 \\
& X0 X2) X3 X6) \Rightarrow (r3_orders_2 (k5_yellow_0 X0 X2) X5 X6))))))))))))) \\
& \hspace{15em} (4)
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \wedge \\
& ((\neg v1_xboole_0 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\
& X0)))))) \Rightarrow ((\neg v2_struct_0 (k5_yellow_0 X0 X1)) \wedge ((v1_orders_2 (\\
& k5_yellow_0 X0 X1)) \wedge (v4_yellow_0 (k5_yellow_0 X0 X1) X0))) \\
& \hspace{15em} (5)
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0. (l1_orders_2 X0) \Rightarrow (\forall X1. (m1_yellow_0 X1 X0) \Rightarrow \\
& (l1_orders_2 X1)) \\
& \hspace{15em} (6)
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. ((l1_struct_0 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\
& (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0)))))) \Rightarrow (\forall X2. \\
& (m1_waybel35 X2 X0 X1) \Rightarrow (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 \\
& X0)))) \\
& \hspace{15em} (7)
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0. (l1_orders_2 X0) \Rightarrow (l1_struct_0 X0) \\
& \hspace{15em} (8)
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. ((l1_orders_2 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\
& (u1_struct_0 X0)))) \Rightarrow ((v1_orders_2 (k5_yellow_0 X0 X1)) \wedge ((v4_yellow_0 \\
& (k5_yellow_0 X0 X1) X0) \wedge (m1_yellow_0 (k5_yellow_0 X0 X1) X0))) \\
& \hspace{15em} (9)
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0. ((v5_orders_2 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. \\
& (m1_yellow_0 X1 X0) \Rightarrow ((v4_yellow_0 X1 X0) \Rightarrow ((v5_orders_2 X1) \wedge (\\
& v4_yellow_0 X1 X0)))) \\
& \hspace{15em} (10)
\end{aligned}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v3_orders_2 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. \\ & (m1_yellow_0 X1 X0) \Rightarrow ((v4_yellow_0 X1 X0) \Rightarrow ((v3_orders_2 X1) \wedge (\\ & v4_yellow_0 X1 X0)))) \end{aligned} \quad (11)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge ((v4_orders_2 \\ & X0) \wedge ((v5_orders_2 X0) \wedge (l1_orders_2 X0)))))) \Rightarrow (\forall X1.((v1_waybel_4 \\ & X1 X0) \wedge ((v2_waybel_4 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ & (u1_struct_0 X0) (u1_struct_0 X0)))))) \Rightarrow (\forall X2.((\neg v1_xboole_0 \\ & X2) \wedge (m1_waybel35 X2 X0 X1)) \Rightarrow (\forall X3.(m1_subset_1 X3 (k1_zfmisc_1 \\ & X2)) \Rightarrow (((r1_yellow_0 X0 X3) \wedge (v2_waybel35 X2 X0 X1)) \Rightarrow (r1_yellow_0 \\ & (k5_yellow_0 X0 X2) X3)))))) \end{aligned}$$