

t8_waybel_8 (TM-
RzG5Qup9dR8fZTuHHAZ3pgFkpkbbX2BBU)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v3_orders_2 : \iota \Rightarrow o$ be given. Let $v5_orders_2 : \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $g1_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $u1_orders_2 : \iota \Rightarrow \iota$ be given. Let $v24_waybel_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_waybel_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $r1_yellow_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_yellow_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r3_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0. ((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge ((v5_orders_2 \\ X0) \wedge (l1_orders_2 X0)))) \Rightarrow ((v24_waybel_0 X0) \Leftrightarrow (\forall X1. ((\neg \\ v1_xboole_0 X1) \wedge ((v1_waybel_0 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ (u1_struct_0 X0)))))) \Rightarrow (r1_yellow_0 X0 X1))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. (l1_orders_2 X0) \Rightarrow (\forall X1. (l1_orders_2 X1) \Rightarrow ((\\ g1_orders_2 (u1_struct_0 X0) (u1_orders_2 X0) = g1_orders_2 (u1_struct_0 \\ X1) (u1_orders_2 X1)) \Rightarrow (\forall X2. (m1_subset_1 X2 (k1_zfmisc_1 \\ (u1_struct_0 X0)))) \Rightarrow (\forall X3. (m1_subset_1 X3 (k1_zfmisc_1 \\ (u1_struct_0 X1)))) \Rightarrow (((X2 = X3) \wedge (v1_waybel_0 X2 X0)) \Rightarrow (v1_waybel_0 \\ X3 X1)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. (l1_orders_2 X0) \Rightarrow (\forall X1. (l1_orders_2 X1) \Rightarrow ((\\ g1_orders_2 (u1_struct_0 X0) (u1_orders_2 X0) = g1_orders_2 (u1_struct_0 \\ X1) (u1_orders_2 X1)) \Rightarrow (\forall X2. (r1_yellow_0 X0 X2) \Rightarrow (k1_yellow_0 \\ X0 X2 = k1_yellow_0 X1 X2)))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned}
& \forall X0.(l1_orders_2 X0) \Rightarrow (\forall X1.(l1_orders_2 X1) \Rightarrow ((\\
& g1_orders_2 (u1_struct_0 X0) (u1_orders_2 X0) = g1_orders_2 (u1_struct_0 \\
& X1) (u1_orders_2 X1)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 \\
& X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\forall X4. \\
& (m1_subset_1 X4 (u1_struct_0 X1)) \Rightarrow (\forall X5.(m1_subset_1 X5 \\
& (u1_struct_0 X1)) \Rightarrow (((X2 = X4) \wedge (X3 = X5)) \Rightarrow (((r1_orders_2 X0 X2 X3) \Rightarrow \\
& (r1_orders_2 X1 X4 X5)) \wedge ((r2_orders_2 X0 X2 X3) \Rightarrow (r2_orders_2 X1 \\
& X4 X5))))))))))
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0) \wedge ((v3_orders_2 \\
& X0) \wedge (l1_orders_2 X0))) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge (\\
& m1_subset_1 X2 (u1_struct_0 X0)))) \Rightarrow ((r3_orders_2 X0 X1 X2) \Leftrightarrow (r1_orders_2 \\
& X0 X1 X2))
\end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\
& X0 X0))) \Rightarrow (\forall X2.\forall X3.(g1_orders_2 X0 X1 = g1_orders_2 \\
& X2 X3) \Rightarrow ((X0 = X2) \wedge (X1 = X3)))
\end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(l1_orders_2 X0) \Rightarrow (m1_subset_1 (u1_orders_2 X0) (k1_zfmisc_1 \\
& (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0))))
\end{aligned} \tag{7}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.(l1_orders_2 X0) \Rightarrow (m1_subset_1 (k1_yellow_0 \\
& X0 X1) (u1_struct_0 X0))
\end{aligned} \tag{8}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge (l1_orders_2 \\
& X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\
& (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow ((r1_waybel_3 X0 X1 X2) \Leftrightarrow (\forall X3. \\
& ((\neg v1_xboole_0 X3) \wedge ((v1_waybel_0 X3 X0) \wedge (m1_subset_1 X3 (k1_zfmisc_1 \\
& (u1_struct_0 X0)))))) \Rightarrow (\neg (r3_orders_2 X0 X2 (k1_yellow_0 X0 X3)) \wedge \\
& (\forall X4.(m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow (\neg (X4 \in X3) \wedge (r3_orders_2 \\
& X0 X1 X4))))))))))
\end{aligned} \tag{9}$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge ((v5_orders_2 \\ & X0) \wedge (l1_orders_2 X0)))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge ((v3_orders_2 \\ & X1) \wedge ((v5_orders_2 X1) \wedge (l1_orders_2 X1)))) \Rightarrow (((g1_orders_2 (\\ & u1_struct_0 X0) (u1_orders_2 X0) = g1_orders_2 (u1_struct_0 X1) \\ & (u1_orders_2 X1)) \wedge (v24_waybel_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 \\ & X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 X1)) \Rightarrow (\forall X5. \\ & (m1_subset_1 X5 (u1_struct_0 X1)) \Rightarrow (((X2 = X4) \wedge ((X3 = X5) \wedge (r1_waybel_3 \\ & X0 X2 X3))) \Rightarrow (r1_waybel_3 X1 X4 X5)))))))))) \end{aligned}$$