

t31_waybel23 (TMGqUfUfR- JEVsX9MYH7E1NvDp1ao6vuczKC)

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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 $v2_lattice3 : \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v13_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v2_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_waybel23 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5_yellow_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_yellow_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\ X0) \wedge ((v2_lattice3 X0) \wedge (l1_orders_2 X0)))))) \Rightarrow (\forall X1.((\neg \\ v1_xboole_0 X1) \wedge ((v13_waybel_0 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ (u1_struct_0 X0)))))) \Rightarrow (((\neg v1_xboole_0 X1) \wedge ((v2_waybel_0 X1 X0) \wedge \\ ((v13_waybel_0 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\ X0)))))) \Leftrightarrow (v5_yellow_0 (k5_yellow_0 X0 X1) X0))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. \\ (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow ((v1_waybel23 \\ X1 X0) \Leftrightarrow (v5_yellow_0 (k5_yellow_0 X0 X1) X0))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\ X0) \wedge ((v2_lattice3 X0) \wedge (l1_orders_2 X0)))))) \Rightarrow (\forall X1.(m1_subset_1 \\ X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow ((v1_waybel23 X1 X0) \Rightarrow (v2_waybel_0 \\ X1 X0))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow ((v2_lattice3 X0) \Rightarrow (\neg v2_struct_0 X0)) \quad (4)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\ & X0) \wedge ((v2_lattice3 X0) \wedge (l1_orders_2 X0)))))) \Rightarrow (\forall X1.((\neg \\ v1_xboole_0 X1) \wedge ((v13_waybel_0 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ (u1_struct_0 X0)))))) \Rightarrow (((\neg v1_xboole_0 X1) \wedge ((v2_waybel_0 X1 X0) \wedge \\ ((v13_waybel_0 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\ X0)))))) \Leftrightarrow (v1_waybel23 X1 X0))) \end{aligned}$$