

t72_waybel_1 (TMdb- wDPbbG6T6q6VxGmsBNmbcfbpC67jqob)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $v9_waybel_1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $r1_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_waybel_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v5_orders_2 : \iota \Rightarrow o$ be given. Let $v2_lattice3 : \iota \Rightarrow o$ be given. Let $v3_orders_2 : \iota \Rightarrow o$ be given. Let $v4_orders_2 : \iota \Rightarrow o$ be given. Let $v1_lattice3 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0. ((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow ((v9_waybel_1 \\ X0) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\ (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. (m1_subset_1 X3 \\ (u1_struct_0 X0)) \Rightarrow ((r1_orders_2 X0 (k11_lattice3 X0 X2 X3) X1) \Leftrightarrow \\ (r1_orders_2 X0 X3 (k6_waybel_1 X0 X2 X1)))))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. ((\neg v2_struct_0 X0) \wedge (v5_orders_2 X0) \wedge ((v2_lattice3 \\ X0) \wedge (l1_orders_2 X0))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 \\ X0)) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. \\ (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow ((X3 = k11_lattice3 X0 X1 X2) \Leftrightarrow \\ ((r1_orders_2 X0 X3 X1) \wedge ((r1_orders_2 X0 X3 X2) \wedge (\forall X4. (m1_subset_1 \\ X4 (u1_struct_0 X0)) \Rightarrow ((r1_orders_2 X0 X4 X1) \wedge (r1_orders_2 X0 \\ X4 X2)) \Rightarrow (r1_orders_2 X0 X4 X3)))))))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. ((l1_orders_2 X0) \wedge ((m1_subset_1 \\ X1 (u1_struct_0 X0)) \wedge (m1_subset_1 X2 (u1_struct_0 X0)))) \Rightarrow (m1_subset_1 \\ (k11_lattice3 X0 X1 X2) (u1_struct_0 X0)) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0. (l1_orders_2 X0) \Rightarrow (((\neg v2_struct_0 X0) \wedge (v9_waybel_1 \\ X0)) \Rightarrow ((\neg v2_struct_0 X0) \wedge (v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge \\ ((v5_orders_2 X0) \wedge ((v1_lattice3 X0) \wedge (v2_lattice3 X0)))))) \end{aligned} \quad (4)$$

Theorem 1

$$\forall X0.((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow ((v9_waybel_1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (r1_orders_2 X0 X2 (k6_waybel_1 X0 X1 X2))))))$$