

t71_waybel23 (TM- PDdpT34EZTsgPvnUKGEdFwJFTi6t2v1Ue)

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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 $v1_yellow_0 : \iota \Rightarrow o$ be given. Let $v1_lattice3 : \iota \Rightarrow o$ be given. Let $v2_lattice3 : \iota \Rightarrow o$ be given. Let $v3_waybel_3 : \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $v2_waybel_8 : \iota \Rightarrow o$ be given. Let $v6_waybel23 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_waybel_8 : \iota \Rightarrow \iota$ be given. Let $m1_waybel23 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. ((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\ & X0) \wedge ((v1_yellow_0 X0) \wedge ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge \\ & ((v3_waybel_3 X0) \wedge (l1_orders_2 X0)))))))) \Rightarrow ((\exists X1. ((v6_waybel23 \\ & X1 X0) \wedge (m1_waybel23 X1 X0)) \wedge (\forall X2. ((v6_waybel23 X2 X0) \wedge \\ & (m1_waybel23 X2 X0)) \Rightarrow (r1_tarski X1 X2))) \Rightarrow (v2_waybel_8 X0)) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\ & X0) \wedge ((v1_yellow_0 X0) \wedge ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge \\ & ((v3_waybel_3 X0) \wedge (l1_orders_2 X0)))))))) \Rightarrow ((v2_waybel_8 X0) \Rightarrow \\ & (((v6_waybel23 (u1_struct_0 (k1_waybel_8 X0)) X0) \wedge (m1_waybel23 \\ & (u1_struct_0 (k1_waybel_8 X0)) X0)) \wedge (\forall X1. ((v6_waybel23 \\ & X1 X0) \wedge (m1_waybel23 X1 X0)) \Rightarrow (r1_tarski (u1_struct_0 (k1_waybel_8 \\ & X0)) X1)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. (l1_orders_2 X0) \Rightarrow (((v3_orders_2 X0) \wedge ((v4_orders_2 \\ & X0) \wedge ((v5_orders_2 X0) \wedge ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge \\ & (v2_waybel_8 X0)))))) \Rightarrow ((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge \\ & ((v5_orders_2 X0) \wedge ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge (v3_waybel_3 \\ & X0)))))) \end{aligned} \quad (3)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\ & X0) \wedge ((v1_yellow_0 X0) \wedge ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge \\ & ((v3_waybel_3 X0) \wedge (l1_orders_2 X0))))))) \Rightarrow ((v2_waybel_8 X0) \Leftrightarrow \\ & (((v6_waybel23 (u1_struct_0 (k1_waybel_8 X0)) X0) \wedge (m1_waybel23 \\ & (u1_struct_0 (k1_waybel_8 X0)) X0)) \wedge (\forall X1.((v6_waybel23 \\ & X1 X0) \wedge (m1_waybel23 X1 X0)) \Rightarrow (r1_tarski (u1_struct_0 (k1_waybel_8 \\ & X0)) X1)))) \end{aligned}$$