

t27_waybel11 (TM-
LauQjj32ySRGWk1UTvWnCVQQPYsDR93HS)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $r1_waybel_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_waybel11 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_waybel_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_orders_2 : \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $r3_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_orders_2 : \iota \Rightarrow o$ be given. Let $v5_orders_2 : \iota \Rightarrow o$ be given. Let $v6_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v7_waybel_0 : \iota \Rightarrow o$ be given. Let $l1_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 \\ & (u1_struct_0 (k4_waybel11 X0 X1))) \Rightarrow (k2_waybel_0 X0 (k4_waybel11 \\ & X0 X1) X2 = X1))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0) \wedge ((v3_orders_2 \\ & X0) \wedge (l1_orders_2 X0))) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge (\\ & m1_subset_1 X2 (u1_struct_0 X0)))) \Rightarrow (r3_orders_2 X0 X1 X1) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0) \wedge ((v3_orders_2 \\ & X0) \wedge (l1_orders_2 X0))) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge (\\ & m1_subset_1 X2 (u1_struct_0 X0)))) \Rightarrow ((r3_orders_2 X0 X1 X2) \Leftrightarrow (r1_orders_2 \\ & X0 X1 X2)) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \wedge \\ & (m1_subset_1 X1 (u1_struct_0 X0))) \Rightarrow ((v3_orders_2 (k4_waybel11 \\ & X0 X1)) \wedge ((v4_orders_2 (k4_waybel11 X0 X1)) \wedge ((v5_orders_2 (k4_waybel11 \\ & X0 X1)) \wedge ((v6_waybel_0 (k4_waybel11 X0 X1) X0) \wedge (v7_waybel_0 (k4_waybel11 \\ & X0 X1)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \wedge \\ & (m1_subset_1 X1 (u1_struct_0 X0))) \Rightarrow ((\neg v2_struct_0 (k4_waybel11 \\ & X0 X1)) \wedge (v6_waybel_0 (k4_waybel11 X0 X1) X0)) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0. \exists X1. m1_subset_1 X1 X0 \quad (6)$$

Assume the following.

$$\forall X0. (l1_struct_0 X0) \Rightarrow (\forall X1. (l1_waybel_0 X1 X0) \Rightarrow (l1_orders_2 X1)) \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \wedge \\ & (m1_subset_1 X1 (u1_struct_0 X0))) \Rightarrow ((v6_waybel_0 (k4_waybel11 \\ & X0 X1) X0) \wedge (l1_waybel_0 (k4_waybel11 X0 X1) X0)) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\forall X1. \\ & ((\neg v2_struct_0 X1) \wedge (l1_waybel_0 X1 X0)) \Rightarrow (\forall X2. (r1_waybel_0 \\ & X0 X1 X2) \Leftrightarrow (\exists X3. (m1_subset_1 X3 (u1_struct_0 X1)) \wedge (\forall X4. \\ & (m1_subset_1 X4 (u1_struct_0 X1)) \Rightarrow ((r1_orders_2 X1 X3 X4) \Rightarrow (k2_waybel_0 \\ & X0 X1 X4 \in X2)))))) \end{aligned} \quad (9)$$

Theorem 1

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. (r1_waybel_0 X0 \\ & (k4_waybel11 X0 X1) X2) \Leftrightarrow (X1 \in X2))) \end{aligned}$$