

t13_waybel31

(TMMK1ssbDngzAeqsmFysTKWbsy7Wc3GWRuF)

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Let $v8_struct_0 : \iota \Rightarrow o$ be given. 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 $v1_lattice3 : \iota \Rightarrow o$ be given. Let $v2_lattice3 : \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $v6_waybel23 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_waybel23 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_card_1 : \iota \Rightarrow \iota$ be given. Let $k1_waybel31 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_waybel_8 : \iota \Rightarrow \iota$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_yellow_0 : \iota \Rightarrow o$ be given. Let $v3_waybel_3 : \iota \Rightarrow o$ be given. Let $v2_waybel_8 : \iota \Rightarrow o$ be given. Let $k1_card_1 : \iota \Rightarrow \iota$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $v3_waybel_8 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_finset_1 X0) \Rightarrow (\forall X1.(v1_finset_1 X1) \Rightarrow ((r1_tarski X0 X1) \wedge (k5_card_1 X0 = k5_card_1 X1)) \Rightarrow (X0 = X1)) \quad (1)$$

Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0.((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\ & X0) \wedge ((v1_yellow_0 X0) \wedge ((v2_waybel_8 X0) \wedge ((v1_lattice3 X0) \wedge \\ & ((v2_lattice3 X0) \wedge (l1_orders_2 X0))))))) \Rightarrow (k1_waybel31 X0 = \\ & k1_card_1 (u1_struct_0 (k1_waybel_8 X0))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.(v1_finset_1 X0) \Rightarrow (k5_card_1 X0 = k1_card_1 X0) \quad (4)$$

Assume the following.

$$\forall X0.((v8_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (v1_finset_1 (u1_struct_0 X0)) \quad (5)$$

Assume the following.

$$\forall X0.((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 X0) \wedge ((v1_lattice3 X0) \wedge ((v3_waybel_3 X0) \wedge (l1_orders_2 X0)))))) \Rightarrow (\forall X1.(m1_waybel23 X1 X0) \Rightarrow (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0)))) \quad (6)$$

Assume the following.

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

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow (((v8_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 X0) \wedge (v2_lattice3 X0)))))) \Rightarrow ((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 X0) \wedge ((v2_lattice3 X0) \wedge (v1_yellow_0 X0))))) \quad (8)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow (((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 X0) \wedge ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge (v3_waybel_8 X0)))))) \Rightarrow ((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 X0) \wedge ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge (v2_waybel_8 X0))))) \quad (9)$$

Assume the following.

$$\forall X0.(v1_finset_1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (v1_finset_1 X1)) \quad (10)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow (((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 X0) \wedge ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge (v2_waybel_8 X0)))))) \Rightarrow ((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 X0) \wedge ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge (v3_waybel_3 X0))))) \quad (11)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow (((v8_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 X0) \wedge ((v1_lattice3 X0) \wedge (v2_lattice3 X0)))))) \Rightarrow ((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 X0) \wedge ((v3_waybel_8 X0) \wedge ((v1_lattice3 X0) \wedge (v2_lattice3 X0))))) \quad (12)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v8_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge ((v4_orders_2 \\ & X0) \wedge ((v5_orders_2 X0) \wedge ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge \\ & (l1_orders_2 X0)))))) \Rightarrow (\forall X1.((v6_waybel23 X1 X0) \wedge (m1_waybel23 \\ & X1 X0)) \Rightarrow ((k5_card_1 X1 = k1_waybel31 X0) \Leftrightarrow (X1 = u1_struct_0 (k1_waybel_8 \\ & X0)))) \end{aligned}$$