

t5_waybel12

(TMUuHRKUaoRW3ucrSUZWjpfvaXkorxq5YSt)

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Let $v2_struct_0 : \iota \Rightarrow o$ 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 $l1_orders_2 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $v2_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ 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 $r2_yellow_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_yellow_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 (k1_zfmisc_1 X1)) \Leftrightarrow (r1_tarski X0 X1) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v5_orders_2 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. (((X1 = k2_yellow_0 \\ & X0 X2) \wedge (r2_yellow_0 X0 X2)) \Rightarrow ((r1_lattice3 X0 X2 X1) \wedge (\forall X3. \\ & (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow ((r1_lattice3 X0 X2 X3) \Rightarrow (r1_orders_2 \\ & X0 X3 X1)))))) \wedge (((r1_lattice3 X0 X2 X1) \wedge (\forall X3. (m1_subset_1 \\ & X3 (u1_struct_0 X0)) \Rightarrow ((r1_lattice3 X0 X2 X3) \Rightarrow (r1_orders_2 X0 X3 \\ & X1)))) \Rightarrow ((X1 = k2_yellow_0 X0 X2) \wedge (r2_yellow_0 X0 X2)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v4_orders_2 X0) \wedge (l1_orders_2 \\ & X0))) \Rightarrow (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\ & X0))) \Rightarrow (((\neg v1_xboole_0 X1) \wedge (v2_waybel_0 X1 X0)) \Leftrightarrow (\forall X2. \\ & ((v1_finset_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 X1))) \Rightarrow (\exists X3. \\ & (m1_subset_1 X3 (u1_struct_0 X0)) \wedge ((X3 \in X1) \wedge (r1_lattice3 X0 X2 \\ & X3)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. r1_tarski X0 X0 \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l1_orders_2 X0) \Rightarrow (\forall X1.\forall X2.(m1_subset_1 \\ & X2 (u1_struct_0 X0)) \Rightarrow ((r1_lattice3 X0 X1 X2) \Leftrightarrow (\forall X3.(m1_subset_1 \\ & X3 (u1_struct_0 X0)) \Rightarrow ((X3 \in X1) \Rightarrow (r1_orders_2 X0 X2 X3)))))) \end{aligned} \quad (5)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge ((v4_orders_2 \\ & X0) \wedge ((v5_orders_2 X0) \wedge (l1_orders_2 X0)))))) \Rightarrow (\forall X1.((\neg \\ & v1_xboole_0 X1) \wedge ((v1_finset_1 X1) \wedge ((v2_waybel_0 X1 X0) \wedge (m1_subset_1 \\ & X1 (k1_zfmisc_1 (u1_struct_0 X0)))))) \Rightarrow ((r2_yellow_0 X0 X1) \Rightarrow (\\ & k2_yellow_0 X0 X1 \in X1))) \end{aligned}$$