

t9_waybel_7 (TMFJUFqDJLQyFoZmxU- uZDT1U15HDuyEin3N)

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Let $v13_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_yellow_1 : \iota \Rightarrow \iota$ 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 $v2_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v5_orders_2 : \iota \Rightarrow o$ be given. Let $v2_lattice3 : \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $k12_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k13_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v1_orders_2 : \iota \Rightarrow o$ be given. Let $v3_orders_2 : \iota \Rightarrow o$ be given. Let $v4_orders_2 : \iota \Rightarrow o$ be given. Let $v11_waybel_1 : \iota \Rightarrow o$ be given. Let $v1_lattice3 : \iota \Rightarrow o$ be given. Let $v3_yellow_0 : \iota \Rightarrow o$ be given. Let $v2_waybel_1 : \iota \Rightarrow o$ be given. Let $v10_waybel_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v5_orders_2 X0) \wedge ((v2_lattice3 X0) \wedge (l1_orders_2 X0))) \Rightarrow (\forall X1. ((v13_waybel_0 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow ((v2_waybel_0 X1 X0) \Leftrightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (((X2 \in X1) \wedge (X3 \in X1)) \Rightarrow (k12_lattice3 X0 X2 X3 \in X1))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1_subset_1 X1 (u1_struct_0 (k3_yellow_1 X0))) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 (k3_yellow_1 X0))) \Rightarrow ((k13_lattice3 (k3_yellow_1 X0) X1 X2 = k2_xboole_0 X1 X2) \wedge (k12_lattice3 (k3_yellow_1 X0) X1 X2 = k3_xboole_0 X1 X2))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. (\neg v2_struct_0 (k3_yellow_1 X0)) \wedge ((v1_orders_2 (k3_yellow_1 X0)) \wedge ((v3_orders_2 (k3_yellow_1 X0)) \wedge ((v4_orders_2 (k3_yellow_1 X0)) \wedge (v5_orders_2 (k3_yellow_1 X0)))))) \quad (4)$$

Assume the following.

$$\forall X0.(v1_orders_2 (k3_yellow_1 X0)) \wedge (v11_waybel_1 (k3_yellow_1 X0)) \quad (5)$$

Assume the following.

$$\forall X0.(v1_orders_2 (k3_yellow_1 X0)) \wedge (l1_orders_2 (k3_yellow_1 X0)) \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_orders_2 X0) \Rightarrow & (((\neg v2_struct_0 X0) \wedge (v11_waybel_1 \\ X0)) \Rightarrow & ((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge \\ ((v5_orders_2 X0) \wedge & ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge ((v3_yellow_0 \\ X0) \wedge & ((v2_waybel_1 X0) \wedge (v10_waybel_1 X0)))))))))) \quad (7) \end{aligned}$$

Theorem 1

$$\begin{aligned} \forall X0.\forall X1.((v13_waybel_0 X1 (k3_yellow_1 X0)) \wedge (m1_subset_1 \\ X1 (k1_zfmisc_1 (u1_struct_0 (k3_yellow_1 X0)))))) \Rightarrow & ((v2_waybel_0 \\ X1 (k3_yellow_1 X0)) \Leftrightarrow & (\forall X2.\forall X3.((X2 \in X1) \wedge (X3 \in X1)) \Rightarrow \\ & (k3_xboole_0 X2 X3 \in X1))) \end{aligned}$$