

t58_waybel_4

(TMY59U2vMNYv5Q73iRixmtL7RxJxwsYsmUg)

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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 $v1_lattice3 : \iota \Rightarrow o$ be given. Let $v2_lattice3 : \iota \Rightarrow o$ be given. Let $v3_lattice3 : \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $r2_waybel_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_waybel_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v8_waybel_4 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $k4_tarSKI : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ 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.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 \\ & X0)))) \Rightarrow (\forall X2. \forall X3. (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow \\ & ((X2 \in k5_waybel_4 X0 X3 X1) \Leftrightarrow (k4_tarSKI X2 X3 \in X1)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((\neg v1_xboole_0 X0) \wedge \\ & ((\neg v1_xboole_0 X1) \wedge ((m1_subset_1 X2 X0) \wedge (m1_subset_1 X3 X1)))) \Rightarrow \\ & (k1_domain_1 X0 X1 X2 X3 = k4_tarSKI X2 X3) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. v1_relat_1 (k2_zfmisc_1 X0 X1) \quad (4)$$

Assume the following.

$$\forall X0. ((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\neg v1_xboole_0 (u1_struct_0 X0)) \quad (5)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow (l1_struct_0 X0) \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0) \wedge (l1_orders_2 \\ X0)) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\ (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0)))))) \Rightarrow (m1_subset_1 \\ (k5_waybel_4 X0 X1 X2) (k1_zfmisc_1 (u1_struct_0 X0)))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.(v1_relat_1 X2) \Rightarrow ((r2_waybel_4 \\ X0 X1 X2) \Leftrightarrow ((X1 \in X0) \wedge (\forall X3.\neg(X3 \in X0) \wedge ((X3 \neq X1) \wedge (k4_tarski \\ X1 X3 \in X2)))))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_orders_2 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 \\ (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0)))) \Rightarrow ((v8_waybel_4 \\ X1 X0) \Leftrightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. \\ (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\neg(k4_tarski X2 X3 \in X1) \wedge ((X2 \neq \\ X3) \wedge (\forall X4.(m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow (\neg(k4_tarski \\ X2 X4 \in X1) \wedge ((k4_tarski X4 X3 \in X1) \wedge (X2 \neq X4)))))))))) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (v1_relat_1 X1)) \quad (10)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow ((v1_lattice3 X0) \Rightarrow (\neg v2_struct_0 X0)) \quad (11)$$

Theorem 1

$$\begin{aligned} \forall X0.(((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\ X0) \wedge ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge ((v3_lattice3 X0) \wedge \\ (l1_orders_2 X0)))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 \\ (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0)))) \Rightarrow ((\forall X2. \\ (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow ((\exists X3.(m1_subset_1 \\ X3 (u1_struct_0 X0)) \wedge (r2_waybel_4 (k5_waybel_4 X0 X2 X1) X3 X1)) \Rightarrow \\ (k1_domain_1 (u1_struct_0 X0) (u1_struct_0 X0) X2 X2 \in X1))) \Rightarrow (v8_waybel_4 \\ X1 X0)))) \end{aligned}$$