

t19_abcmiz_0

(TMHC2HotgKb5mfhtaY5FJKYxWyHWRKdHbjt)

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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 $v9_abcmiz_0 : \iota \Rightarrow o$ be given. Let $l2_abcmiz_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_abcmiz_0 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $r1_abcmiz_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k3_finsub_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k3_abcmiz_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_waybel_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v12_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $v2_lattice3 : \iota \Rightarrow o$ be given. Let $k9_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $v4_finsub_1 : \iota \Rightarrow o$ be given. Let $k3_waybel_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_abcmiz_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. \neg (X0 \in X1) \wedge (v1_xboole_0 X1) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. \neg (X0 \in X1) \wedge ((m1_subset_1 X1 (k1_zfmisc_1 X2)) \wedge (v1_xboole_0 X2)) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v5_orders_2 X0) \wedge (l1_orders_2 X0))) \Rightarrow (((v1_lattice3 X0) \vee (v2_lattice3 X0)) \Rightarrow (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow (\forall X2. (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow (((v12_waybel_0 X1 X0) \wedge ((v1_waybel_0 X1 X0) \wedge ((v12_waybel_0 X2 X0) \wedge (v1_waybel_0 X2 X0)))) \Rightarrow (v1_waybel_0 (k9_subset_1 (u1_struct_0 X0) X1 X2) X0)))) \quad (3) \end{aligned}$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_orders_2 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 \\ (u1_struct_0 X0))) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\ (u1_struct_0 X0))) \Rightarrow ((v12_waybel_0 X1 X0) \wedge (v12_waybel_0 X2 X0)) \Rightarrow \\ ((v12_waybel_0 (k9_subset_1 (u1_struct_0 X0) X1 X2) X0) \wedge (v12_waybel_0 \\ (k4_subset_1 (u1_struct_0 X0) X1 X2) X0)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. \\ (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 \\ (u1_struct_0 X0)) \Rightarrow ((X2 \in k5_waybel_0 X0 X1) \Leftrightarrow (r1_orders_2 X0 X2 \\ X1)))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\ X0)) \Rightarrow (k9_subset_1 X0 X1 X2 = k3_xboole_0 X1 X2) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge (m1_subset_1 X1 X0)) \Rightarrow \\ (k6_domain_1 X0 X1 = k1_tarSKI X1) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.(((\neg v1_xboole_0 X0) \wedge (v4_finsub_1 \\ X0)) \wedge ((m1_subset_1 X1 X0) \wedge (m1_subset_1 X2 X0))) \Rightarrow (k3_finsub_1 \\ X0 X1 X2 = k3_xboole_0 X1 X2) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge \\ (l1_orders_2 X0))) \wedge (m1_subset_1 X1 (u1_struct_0 X0))) \Rightarrow ((\neg v1_xboole_0 \\ (k5_waybel_0 X0 X1)) \wedge (v1_waybel_0 (k5_waybel_0 X0 X1) X0)) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge \\ ((v5_orders_2 X0) \wedge (v1_lattice3 X0) \wedge ((v9_abcmiz_0 X0) \wedge (l2_abcmiz_0 \\ X0)))))) \wedge (m1_subset_1 X1 (u1_abcmiz_0 X0))) \Rightarrow ((v1_waybel_0 (\\ k3_abcmiz_0 X0 X1) X0) \wedge (v12_waybel_0 (k3_abcmiz_0 X0 X1) X0)) \end{aligned} \quad (10)$$

Assume the following.

$$\forall X0.\neg v1_xboole_0 (k1_zfmisc_1 X0) \quad (11)$$

Assume the following.

$$\forall X0.v4_finsub_1 (k1_zfmisc_1 X0) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2_struct_0 X0)\wedge((v4_orders_2 X0)\wedge(l1_orders_2 X0)))\wedge(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))))\Rightarrow(v12_waybel_0 (k3_waybel_0 X0 X1) X0) \quad (13)$$

Assume the following.

$$\forall X0.(l2_abcmiz_0 X0)\Rightarrow((l1_orders_2 X0)\wedge(l1_abcmiz_0 X0)) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge(m1_subset_1 X1 X0))\Rightarrow(m1_subset_1 (k6_domain_1 X0 X1) (k1_zfmisc_1 X0)) \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.((l1_orders_2 X0)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))))\Rightarrow(m1_subset_1 (k3_waybel_0 X0 X1) (k1_zfmisc_1 (u1_struct_0 X0))) \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v1_xboole_0 X0)\wedge(v4_finsub_1 X0))\wedge((m1_subset_1 X1 X0)\wedge(m1_subset_1 X2 X0)))\Rightarrow(m1_subset_1 (k3_finsub_1 X0 X1 X2) X0) \quad (17)$$

Assume the following.

$$\forall X0.\forall X1.((l2_abcmiz_0 X0)\wedge(m1_subset_1 X1 (u1_abcmiz_0 X0)))\Rightarrow(m1_subset_1 (k3_abcmiz_0 X0 X1) (k1_zfmisc_1 (u1_struct_0 X0))) \quad (18)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X2 = k3_xboole_0 X0 X1)\Leftrightarrow(\forall X3.(X3 \in X2)\Leftrightarrow((X3 \in X0)\wedge(X3 \in X1))) \quad (19)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0)\wedge(l1_orders_2 X0))\Rightarrow(\forall X1.(m1_subset_1 X1 (u1_struct_0 X0))\Rightarrow(k5_waybel_0 X0 X1 = k3_waybel_0 X0 (k6_domain_1 (u1_struct_0 X0) X1))) \quad (20)$$

Assume the following.

$$\forall X0.(l2_abcmiz_0 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (u1_struct_0 X0))\Rightarrow(\forall X2.(m1_subset_1 X2 (u1_abcmiz_0 X0))\Rightarrow((r1_abcmiz_0 X0 X1 X2)\Leftrightarrow(\exists X3.(m1_subset_1 X3 (u1_struct_0 X0))\wedge((X3 \in k3_abcmiz_0 X0 X2)\wedge(r1_orders_2 X0 X3 X1)))))) \quad (21)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0)\Rightarrow((v1_lattice3 X0)\Rightarrow(\neg v2_struct_0 X0)) \quad (22)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\ & X0) \wedge ((v1_lattice3 X0) \wedge ((v9_abcmiz_0 X0) \wedge (l2_abcmiz_0 X0)))))) \Rightarrow \\ & (\forall X1.(m1_subset_1 X1 (u1_abcmiz_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 \\ & X2 (u1_struct_0 X0)) \Rightarrow ((r1_abcmiz_0 X0 X2 X1) \Rightarrow ((\neg v1_xboole_0 (\\ & k3_finsub_1 (k1_zfmisc_1 (u1_struct_0 X0)) (k3_abcmiz_0 X0 X1) \\ & (k5_waybel_0 X0 X2))) \wedge ((v1_waybel_0 (k3_finsub_1 (k1_zfmisc_1 \\ & (u1_struct_0 X0)) (k3_abcmiz_0 X0 X1) (k5_waybel_0 X0 X2)) X0) \wedge \\ & ((v12_waybel_0 (k3_finsub_1 (k1_zfmisc_1 (u1_struct_0 X0)) (\\ & k3_abcmiz_0 X0 X1) (k5_waybel_0 X0 X2)) X0) \wedge (m1_subset_1 (k3_finsub_1 \\ & (k1_zfmisc_1 (u1_struct_0 X0)) (k3_abcmiz_0 X0 X1) (k5_waybel_0 \\ & X0 X2)) (k1_zfmisc_1 (u1_struct_0 X0)))))))))) \end{aligned}$$