

t23_abcmiz_0

(TMVY5jJxDyoUve4b9WEd3vTYn4Rc9T9kvBz)

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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 $v1_abcmiz_0 : \iota \Rightarrow o$ 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 $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $u1_abcmiz_0 : \iota \Rightarrow \iota$ be given. Let $r3_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_abcmiz_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_abcmiz_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_abcmiz_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $k1_yellow_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_yellow_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ 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 $k3_finsub_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v4_finsub_1 : \iota \Rightarrow o$ be given. Let $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_abcmiz_0 : \iota \Rightarrow o$ 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.

$$\begin{aligned} & \forall X0. ((v5_orders_2 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. (((X1 = k1_yellow_0 \\ & X0 X2) \wedge (r1_yellow_0 X0 X2)) \Rightarrow ((r2_lattice3 X0 X2 X1) \wedge (\forall X3. \\ & (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow ((r2_lattice3 X0 X2 X3) \Rightarrow (r1_orders_2 \\ & X0 X1 X3)))))) \wedge (((r2_lattice3 X0 X2 X1) \wedge (\forall X3. (m1_subset_1 \\ & X3 (u1_struct_0 X0)) \Rightarrow ((r2_lattice3 X0 X2 X3) \Rightarrow (r1_orders_2 X0 X1 \\ & X3)))) \Rightarrow ((X1 = k1_yellow_0 X0 X2) \wedge (r1_yellow_0 X0 X2)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\ & X0) \wedge ((v1_lattice3 X0) \wedge ((v1_abcmiz_0 X0) \wedge (l1_orders_2 X0)))))) \Rightarrow \\ & (\forall X1.((\neg v1_xboole_0 X1) \wedge ((v1_waybel_0 X1 X0) \wedge ((v12_waybel_0 \\ & X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0)))))) \Rightarrow ((\\ & r1_yellow_0 X0 X1) \wedge (k1_yellow_0 X0 X1 \in X1))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\ & X0) \wedge ((v1_lattice3 X0) \wedge ((v9_abcmiz_0 X0) \wedge (l2_abcmiz_0 X0)))))) \Rightarrow \\ & (\forall X1.(m1_subset_1 X1 (u1_abcmiz_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 \\ & X2 (u1_struct_0 X0)) \Rightarrow ((r1_abcmiz_0 X0 X2 X1) \Rightarrow ((\neg v1_xboole_0 (\\ & k3_finsub_1 (k1_zfmisc_1 (u1_struct_0 X0)) (k3_abcmiz_0 X0 X1) \\ & (k5_waybel_0 X0 X2))) \wedge ((v1_waybel_0 (k3_finsub_1 (k1_zfmisc_1 \\ & (u1_struct_0 X0)) (k3_abcmiz_0 X0 X1) (k5_waybel_0 X0 X2)) X0) \wedge \\ & ((v12_waybel_0 (k3_finsub_1 (k1_zfmisc_1 (u1_struct_0 X0)) (\\ & k3_abcmiz_0 X0 X1) (k5_waybel_0 X0 X2)) X0) \wedge (m1_subset_1 (k3_finsub_1 \\ & (k1_zfmisc_1 (u1_struct_0 X0)) (k3_abcmiz_0 X0 X1) (k5_waybel_0 \\ & X0 X2)) (k1_zfmisc_1 (u1_struct_0 X0)))))))))) \end{aligned} \quad (4)$$

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.

$$\begin{aligned} & \forall X0.(l2_abcmiz_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_abcmiz_0 X0)) \Rightarrow ((X2 \in k2_abcmiz_0 \\ & X0 X1) \Leftrightarrow (X1 \in k3_abcmiz_0 X0 X2)))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0) \wedge ((v3_orders_2 \\ & X0) \wedge (l1_orders_2 X0))) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge (\\ & m1_subset_1 X2 (u1_struct_0 X0)))) \Rightarrow ((r3_orders_2 X0 X1 X2) \Leftrightarrow (r1_orders_2 \\ & X0 X1 X2)) \end{aligned} \quad (7)$$

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.

$$\forall X0. \neg v1_xboole_0 (k1_zfmisc_1 X0) \quad (9)$$

Assume the following.

$$\forall X0. v4_finsub_1 (k1_zfmisc_1 X0) \quad (10)$$

Assume the following.

$$\forall X0. (l2_abcmiz_0 X0) \Rightarrow ((l1_orders_2 X0) \wedge (l1_abcmiz_0 X0)) \quad (11)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \wedge \\ (m1_subset_1 X1 (u1_struct_0 X0))) \Rightarrow (m1_subset_1 (k5_waybel_0 \\ X0 X1) (k1_zfmisc_1 (u1_struct_0 X0))) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. ((l2_abcmiz_0 X0) \wedge (m1_subset_1 X1 (u1_abcmiz_0 \\ X0))) \Rightarrow (m1_subset_1 (k3_abcmiz_0 X0 X1) (k1_zfmisc_1 (u1_struct_0 \\ X0))) \end{aligned} \quad (13)$$

Assume the following.

$$\forall X0. \forall X1. (l1_orders_2 X0) \Rightarrow (m1_subset_1 (k1_yellow_0 \\ X0 X1) (u1_struct_0 X0)) \quad (14)$$

Assume the following.

$$\begin{aligned} \forall X0. (l1_orders_2 X0) \Rightarrow (\forall X1. \forall X2. (m1_subset_1 \\ X2 (u1_struct_0 X0)) \Rightarrow ((r2_lattice3 X0 X1 X2) \Leftrightarrow (\forall X3. (m1_subset_1 \\ X3 (u1_struct_0 X0)) \Rightarrow ((X3 \in X1) \Rightarrow (r1_orders_2 X0 X3 X2)))))) \end{aligned} \quad (15)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. (X2 = k3_xboole_0 X0 X1) \Leftrightarrow (\forall X3. \\ (X3 \in X2) \Leftrightarrow ((X3 \in X0) \wedge (X3 \in X1))) \end{aligned} \quad (16)$$

Assume the following.

$$\begin{aligned} \forall X0. (((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge ((v4_orders_2 \\ X0) \wedge (l2_abcmiz_0 X0)))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 \\ X0)) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_abcmiz_0 X0)) \Rightarrow (k5_abcmiz_0 \\ X0 X1 X2 = k1_yellow_0 X0 (k3_finsub_1 (k1_zfmisc_1 (u1_struct_0 \\ X0)) (k3_abcmiz_0 X0 X2) (k5_waybel_0 X0 X1)))))) \end{aligned} \quad (17)$$

Assume the following.

$$\begin{aligned} \forall X0.(l2_abcmiz_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_abcmiz_0 X0)) \Rightarrow ((r1_abcmiz_0 \\ X0 X1 X2) \Leftrightarrow (\exists X3.(m1_subset_1 X3 (u1_struct_0 X0)) \wedge ((X3 \in \\ k3_abcmiz_0 X0 X2) \wedge (r1_orders_2 X0 X3 X1)))))) \end{aligned} \quad (18)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow ((v1_lattice3 X0) \Rightarrow (\neg v2_struct_0 X0)) \quad (19)$$

Theorem 1

$$\begin{aligned} \forall X0.((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\ X0) \wedge ((v1_lattice3 X0) \wedge ((v1_abcmiz_0 X0) \wedge ((v9_abcmiz_0 X0) \wedge \\ (l2_abcmiz_0 X0))))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_abcmiz_0 X0)) \Rightarrow (\forall X3. \\ (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (((r3_orders_2 X0 X3 X1) \wedge (X2 \in \\ k2_abcmiz_0 X0 X3)) \Rightarrow ((r1_abcmiz_0 X0 X1 X2) \wedge (r3_orders_2 X0 X3 \\ (k5_abcmiz_0 X0 X1 X2))))))) \end{aligned}$$