

t6_waybel16

(TMH1H7VEK4emEeWcyM7ETkQziawNDf3GxTH)

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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 $v2_lattice3 : \iota \Rightarrow o$ 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 $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k7_lattice3 : \iota \Rightarrow \iota$ be given. Let $k4_yellow_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_yellow_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $g1_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_orders_2 : \iota \Rightarrow \iota$ be given. Let $v1_lattice3 : \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $k3_yellow_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_orders_2 : \iota \Rightarrow o$ be given. Let $k3_reset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. (l1_orders_2 X0) \Rightarrow (k7_lattice3 (k7_lattice3 X0) = g1_orders_2 (u1_struct_0 X0) (u1_orders_2 X0)) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\ & X0) \wedge ((v1_lattice3 X0) \wedge (l1_orders_2 X0)))))) \Rightarrow (\forall X1. (m1_subset_1 \\ & X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\forall X2. (m1_subset_1 \\ & X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\forall X3. (m1_subset_1 \\ & X3 (k1_zfmisc_1 (u1_struct_0 (k7_lattice3 X0)))) \Rightarrow (\forall X4. \\ & (m1_subset_1 X4 (k1_zfmisc_1 (u1_struct_0 (k7_lattice3 X0)))) \Rightarrow \\ & (((X1 = X3) \wedge (X2 = X4)) \Rightarrow (k2_yellow_4 X0 X1 X2 = k4_yellow_4 (k7_lattice3 \\ & X0) X3 X4)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\ X0) \wedge ((v2_lattice3 X0) \wedge (l1_orders_2 X0)))))) \Rightarrow (\forall X1.((\neg \\ v2_struct_0 X1) \wedge (l1_orders_2 X1)) \Rightarrow (\forall X2.(m1_subset_1 \\ X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\forall X3.(m1_subset_1 \\ X3 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\forall X4.(m1_subset_1 \\ X4 (k1_zfmisc_1 (u1_struct_0 X1))) \Rightarrow (\forall X5.(m1_subset_1 \\ X5 (k1_zfmisc_1 (u1_struct_0 X1))) \Rightarrow (((g1_orders_2 (u1_struct_0 \\ X0) (u1_orders_2 X0) = g1_orders_2 (u1_struct_0 X1) (u1_orders_2 \\ X1)) \wedge ((X2 = X4) \wedge (X3 = X5))) \Rightarrow (k4_yellow_4 X0 X2 X3 = k3_yellow_4 X1 \\ X4 X5))))))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.(((v5_orders_2 X0) \wedge ((v2_lattice3 \\ X0) \wedge (l1_orders_2 X0))) \wedge ((m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\ X0))) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0)))))) \Rightarrow (k4_yellow_4 \\ X0 X1 X2 = k3_yellow_4 X0 X1 X2) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ X0 X0))) \Rightarrow (\forall X2.\forall X3.(g1_orders_2 X0 X1 = g1_orders_2 \\ X2 X3) \Rightarrow ((X0 = X2) \wedge (X1 = X3))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_lattice3 X0) \wedge (l1_orders_2 X0)) \Rightarrow ((v1_orders_2 \\ (k7_lattice3 X0)) \wedge (v2_lattice3 (k7_lattice3 X0))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.((v2_lattice3 X0) \wedge (l1_orders_2 X0)) \Rightarrow ((v1_orders_2 \\ (k7_lattice3 X0)) \wedge (v1_lattice3 (k7_lattice3 X0))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.((v5_orders_2 X0) \wedge (l1_orders_2 X0)) \Rightarrow ((v1_orders_2 \\ (k7_lattice3 X0)) \wedge (v5_orders_2 (k7_lattice3 X0))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.((v4_orders_2 X0) \wedge (l1_orders_2 X0)) \Rightarrow ((v1_orders_2 \\ (k7_lattice3 X0)) \wedge (v4_orders_2 (k7_lattice3 X0))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.((v3_orders_2 X0) \wedge (l1_orders_2 X0)) \Rightarrow ((v1_orders_2 \\ (k7_lattice3 X0)) \wedge (v3_orders_2 (k7_lattice3 X0))) \end{aligned} \quad (10)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow (m1_subset_1 (u1_orders_2 X0) (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0)))) \quad (11)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow ((v1_orders_2 (k7_lattice3 X0)) \wedge (l1_orders_2 (k7_lattice3 X0))) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (m1_subset_1 (k3_relset_1 X0 X1 X2) (k1_zfmisc_1 (k2_zfmisc_1 X1 X0))) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0))) \Rightarrow ((v1_orders_2 (g1_orders_2 X0 X1)) \wedge (l1_orders_2 (g1_orders_2 X0 X1))) \quad (14)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow (k7_lattice3 X0 = g1_orders_2 (u1_struct_0 X0) (k3_relset_1 (u1_struct_0 X0) (u1_struct_0 X0) (u1_orders_2 X0))) \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((v5_orders_2 X0) \wedge ((v2_lattice3 X0) \wedge (l1_orders_2 X0))) \wedge ((m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0))))) \Rightarrow (k4_yellow_4 X0 X1 X2 = k4_yellow_4 X0 X2 X1) \quad (16)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow ((v2_lattice3 X0) \Rightarrow (\neg v2_struct_0 X0)) \quad (17)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow ((v1_orders_2 X0) \Rightarrow (X0 = g1_orders_2 (u1_struct_0 X0) (u1_orders_2 X0))) \quad (18)$$

Theorem 1

$$\forall X0.(((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 X0) \wedge ((v2_lattice3 X0) \wedge (l1_orders_2 X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\forall X3.(m1_subset_1 X3 (k1_zfmisc_1 (u1_struct_0 (k7_lattice3 X0))) \Rightarrow (\forall X4.(m1_subset_1 X4 (k1_zfmisc_1 (u1_struct_0 (k7_lattice3 X0)))) \Rightarrow (((X1 = X3) \wedge (X2 = X4)) \Rightarrow (k4_yellow_4 X0 X1 X2 = k2_yellow_4 (k7_lattice3 X0) X3 X4))))))) \quad (19)$$