

l28_waybel17

(TMSqthkKtY2xkLeZge2TmBEUJQpPe7xpjt8)

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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 $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v5_orders_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r3_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_yellow_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $r2_yellow_0 : \iota \Rightarrow o$ be given. Let $r1_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. \\
 & ((\neg v2_struct_0 X1) \wedge (l1_orders_2 X1)) \Rightarrow (\forall X2. (m1_subset_1 \\
 & X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\forall X3. ((v1_funct_1 \\
 & X3) \wedge ((v1_funct_2 X3 (u1_struct_0 X0) (u1_struct_0 X1)) \wedge (m1_subset_1 \\
 & X3 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1)))))) \Rightarrow \\
 & ((v5_orders_3 X3 X0 X1) \Rightarrow (((\neg (r2_yellow_0 X0 X2) \wedge (r2_yellow_0 \\
 & X1 (k7_relset_1 (u1_struct_0 X0) (u1_struct_0 X1) X3 X2))) \wedge (\neg \\
 & v3_lattice3 X0) \wedge ((v5_orders_2 X0) \wedge ((v3_lattice3 X1) \wedge (v5_orders_2 \\
 & X1)))))) \vee (r1_orders_2 X1 (k3_funct_2 (u1_struct_0 X0) (u1_struct_0 \\
 & X1) X3 (k2_yellow_0 X0 X2) (k2_yellow_0 X1 (k7_relset_1 (u1_struct_0 \\
 & X0) (u1_struct_0 X1) X3 X2)))))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge ((v3_orders_2 \\
 & X0) \wedge (l1_orders_2 X0))) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge (\\
 & m1_subset_1 X2 (u1_struct_0 X0)))) \Rightarrow ((r3_orders_2 X0 X1 X2) \Leftrightarrow (r1_orders_2 \\
 & X0 X1 X2))
 \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\neg v1_xboole_0 \\
 & (u1_struct_0 X0))
 \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow (l1_struct_0 X0) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0 X0) \wedge \\ & (((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1)))))) \wedge (m1_subset_1 X3 X0))) \Rightarrow (m1_subset_1 (\\ & k3_funct_2 X0 X1 X2 X3) X1) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(l1_orders_2 X0) \Rightarrow (m1_subset_1 (k2_yellow_0 X0 X1) (u1_struct_0 X0)) \quad (6)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow ((v1_lattice3 X0) \Rightarrow (\neg v2_struct_0 X0)) \quad (7)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\ & X0) \wedge ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge ((v3_lattice3 X0) \wedge \\ & (l1_orders_2 X0))))))) \Rightarrow (\forall X1.((v3_orders_2 X1) \wedge ((v4_orders_2 \\ & X1) \wedge ((v5_orders_2 X1) \wedge ((v1_lattice3 X1) \wedge ((v2_lattice3 X1) \wedge \\ & ((v3_lattice3 X1) \wedge (l1_orders_2 X1))))))) \Rightarrow (\forall X2.(m1_subset_1 \\ & X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\forall X3.((v1_funct_1 \\ & X3) \wedge ((v1_funct_2 X3 (u1_struct_0 X0) (u1_struct_0 X1)) \wedge (m1_subset_1 \\ & X3 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1)))))) \Rightarrow \\ & ((v5_orders_3 X3 X0 X1) \Rightarrow (r3_orders_2 X1 (k3_funct_2 (u1_struct_0 \\ & X0) (u1_struct_0 X1) X3 (k2_yellow_0 X0 X2)) (k2_yellow_0 X1 (k7_relset_1 \\ & (u1_struct_0 X0) (u1_struct_0 X1) X3 X2)))))) \end{aligned}$$