

t17_waybel17 (TMKB-
HXvwwSjyjgu6a8iQQ7pRm2bSmzKNqAf)

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Let $v2_struct_0 : \iota \Rightarrow o$ 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 $r2_yellow_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_lattice3 : \iota \Rightarrow o$ be given. Let $v5_orders_2 : \iota \Rightarrow o$ be given. Let $r1_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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 $r1_yellow_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((v5_orders_2 X0) \wedge ((v3_lattice3 X0) \wedge (l1_orders_2 X0)))) \Rightarrow (\forall X1.(r1_yellow_0 X0 X1) \wedge (r2_yellow_0 X0 X1)) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. \\ & ((\neg v2_struct_0 X1) \wedge (l1_orders_2 X1)) \Rightarrow (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 X1)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1)))))) \Rightarrow \\ & (\forall X3.(m1_subset_1 X3 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow \\ & (\forall X4.(m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow (((v5_orders_3 X2 X0 X1) \wedge (r1_lattice3 X0 X3 X4)) \Rightarrow (r1_lattice3 X1 (k7_relset_1 (u1_struct_0 X0) (u1_struct_0 X1) X2 X3) (k3_funct_2 (u1_struct_0 X0) (u1_struct_0 X1) X2 X4))))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\neg v1_xboole_0 (u1_struct_0 X0)) \quad (3)$$

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.

$$\begin{aligned} & \forall X0.(l1_orders_2 X0)\Rightarrow(\forall X1.\forall X2.(m1_subset_1 \\ & X2 (u1_struct_0 X0))\Rightarrow((r2_yellow_0 X0 X1)\Rightarrow((X2 = k2_yellow_0 X0 \\ & X1)\Leftrightarrow((r1_lattice3 X0 X1 X2)\wedge(\forall X3.(m1_subset_1 X3 (u1_struct_0 \\ & X0))\Rightarrow((r1_lattice3 X0 X1 X3)\Rightarrow(r1_orders_2 X0 X3 X2)))))) \end{aligned} \quad (7)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge(l1_orders_2 X0))\Rightarrow(\forall X1. \\ & ((\neg v2_struct_0 X1)\wedge(l1_orders_2 X1))\Rightarrow(\forall X2.(m1_subset_1 \\ & X2 (k1_zfmisc_1 (u1_struct_0 X0))\Rightarrow(\forall X3.((v1_funct_1 \\ & X3)\wedge((v1_funct_2 X3 (u1_struct_0 X0) (u1_struct_0 X1))\wedge(m1_subset_1 \\ & X3 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1))))))\Rightarrow \\ & ((v5_orders_3 X3 X0 X1)\Rightarrow(((\neg(r2_yellow_0 X0 X2)\wedge(r2_yellow_0 \\ & X1 (k7_reset_1 (u1_struct_0 X0) (u1_struct_0 X1) X3 X2)))\wedge(\neg(\\ & v3_lattice3 X0)\wedge(v5_orders_2 X0)\wedge((v3_lattice3 X1)\wedge(v5_orders_2 \\ & X1))))))\vee(r1_orders_2 X1 (k3_funct_2 (u1_struct_0 X0) (u1_struct_0 \\ & X1) X3 (k2_yellow_0 X0 X2)) (k2_yellow_0 X1 (k7_reset_1 (u1_struct_0 \\ & X0) (u1_struct_0 X1) X3 X2)))))) \end{aligned}$$