

t64_waybel23

(TMQk5HEAwPVUufL52vuqYP51GoC1zJYzjcn)

October 27, 2020

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 $v1_yellow_0 : \iota \Rightarrow o$ be given. Let $v1_lattice3 : \iota \Rightarrow o$ be given. Let $v3_waybel_3 : \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $v6_waybel23 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_waybel23 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_waybel_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_waybel23 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_yellow_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_yellow_1 : \iota \Rightarrow \iota$ be given. Let $k7_waybel_0 : \iota \Rightarrow \iota$ be given. Let $v5_waybel_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_waybel23 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_waybel_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_waybel_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v1_orders_2 : \iota \Rightarrow o$ 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 $v4_yellow_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_yellow_0 : \iota \Rightarrow \iota \Rightarrow o$ 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. Assume the following.

$$\begin{aligned} & \forall X0.((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\ & X0) \wedge ((v1_yellow_0 X0) \wedge ((v1_lattice3 X0) \wedge ((v3_waybel_3 X0) \wedge \\ & (l1_orders_2 X0)))))) \Rightarrow (\forall X1.((v6_waybel23 X1 X0) \wedge (m1_waybel23 \\ & X1 X0)) \Rightarrow (v3_waybel_1 (k1_waybel_1 (k2_yellow_1 (k7_waybel_0 \\ & (k5_yellow_0 X0 X1))) X0 (k3_waybel23 X0 (k5_yellow_0 X0 X1)) (k5_waybel23 \\ & X0 X1)) (k2_yellow_1 (k7_waybel_0 (k5_yellow_0 X0 X1))) X0)) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.(\neg v1_xboole_0 X0) \Rightarrow ((\neg v2_struct_0 (k2_yellow_1 X0)) \wedge (v1_orders_2 (k2_yellow_1 X0))) \quad (2)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge (l1_orders_2 X0)))) \Rightarrow (\neg v1_xboole_0 (k7_waybel_0 X0)) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \wedge \\ & ((\neg v1_xboole_0 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\ & X0)))))) \Rightarrow ((\neg v2_struct_0 (k5_yellow_0 X0 X1)) \wedge ((v1_orders_2 (\\ & k5_yellow_0 X0 X1)) \wedge (v4_yellow_0 (k5_yellow_0 X0 X1) X0))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((v4_orders_2 X0) \wedge (l1_orders_2 X0)) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow ((v1_orders_2 \\ & (k5_yellow_0 X0 X1)) \wedge ((v4_orders_2 (k5_yellow_0 X0 X1)) \wedge (v4_yellow_0 \\ & (k5_yellow_0 X0 X1) X0))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((v3_orders_2 X0) \wedge (l1_orders_2 X0)) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow ((v1_orders_2 \\ & (k5_yellow_0 X0 X1)) \wedge ((v3_orders_2 (k5_yellow_0 X0 X1)) \wedge (v4_yellow_0 \\ & (k5_yellow_0 X0 X1) X0))) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0. (l1_orders_2 X0) \Rightarrow (\forall X1. (m1_yellow_0 X1 X0) \Rightarrow (l1_orders_2 X1)) \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\ & X0) \wedge ((v1_lattice3 X0) \wedge ((v3_waybel_3 X0) \wedge (l1_orders_2 X0)))))) \Rightarrow \\ & (\forall X1. (m1_waybel23 X1 X0) \Rightarrow (m1_subset_1 X1 (k1_zfmisc_1 \\ & (u1_struct_0 X0)))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((l1_orders_2 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ & (u1_struct_0 X0)))) \Rightarrow ((v1_orders_2 (k5_yellow_0 X0 X1)) \wedge ((v4_yellow_0 \\ & (k5_yellow_0 X0 X1) X0) \wedge (m1_yellow_0 (k5_yellow_0 X0 X1) X0))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge \\ & ((v5_orders_2 X0) \wedge ((v1_yellow_0 X0) \wedge ((v1_lattice3 X0) \wedge ((v3_waybel_3 \\ & X0) \wedge (l1_orders_2 X0)))))) \wedge ((v6_waybel23 X1 X0) \wedge (m1_waybel23 \\ & X1 X0))) \Rightarrow ((v1_funct_1 (k5_waybel23 X0 X1)) \wedge ((v1_funct_2 (k5_waybel23 \\ & X0 X1) (u1_struct_0 X0) (u1_struct_0 (k2_yellow_1 (k7_waybel_0 \\ & (k5_yellow_0 X0 X1)))))) \wedge (m1_subset_1 (k5_waybel23 X0 X1) (k1_zfmisc_1 \\ & (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 (k2_yellow_1 (k7_waybel_0 \\ & (k5_yellow_0 X0 X1)))))))))) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge \\ & ((v4_orders_2 X0) \wedge (l1_orders_2 X0)))) \wedge ((\neg v2_struct_0 X1) \wedge \\ & (v4_yellow_0 X1 X0) \wedge (m1_yellow_0 X1 X0))) \Rightarrow ((v1_funct_1 (k3_waybel23 \\ & X0 X1)) \wedge ((v1_funct_2 (k3_waybel23 X0 X1) (u1_struct_0 (k2_yellow_1 \\ & (k7_waybel_0 X1))) (u1_struct_0 X0)) \wedge (m1_subset_1 (k3_waybel23 \\ & X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 (k2_yellow_1 (k7_waybel_0 \\ & X1))) (u1_struct_0 X0)))))) \end{aligned} \quad (11)$$

Assume the following.

$$\forall X0. (v1_orders_2 (k2_yellow_1 X0)) \wedge (l1_orders_2 (k2_yellow_1 X0)) \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. \\ & ((\neg v2_struct_0 X1) \wedge (l1_orders_2 X1)) \Rightarrow (\forall X2. ((v1_funct_1 \\ & X2) \wedge ((v1_funct_2 X2 (u1_struct_0 X1) (u1_struct_0 X0)) \wedge (m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X1) (u1_struct_0 X0)))))) \Rightarrow \\ & ((v5_waybel_1 X2 X0 X1) \Leftrightarrow (\exists X3. ((v1_funct_1 X3) \wedge ((v1_funct_2 \\ & X3 (u1_struct_0 X0) (u1_struct_0 X1)) \wedge (m1_subset_1 X3 (k1_zfmisc_1 \\ & (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1)))))) \wedge (v3_waybel_1 \\ & (k1_waybel_1 X0 X1 X3 X2) X0 X1)))))) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. \\ & ((\neg v2_struct_0 X1) \wedge (l1_orders_2 X1)) \Rightarrow (\forall X2. ((v1_funct_1 \\ & X2) \wedge ((v1_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 X1)) \wedge (m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1)))))) \Rightarrow \\ & ((v4_waybel_1 X2 X0 X1) \Leftrightarrow (\exists X3. ((v1_funct_1 X3) \wedge ((v1_funct_2 \\ & X3 (u1_struct_0 X1) (u1_struct_0 X0)) \wedge (m1_subset_1 X3 (k1_zfmisc_1 \\ & (k2_zfmisc_1 (u1_struct_0 X1) (u1_struct_0 X0)))))) \wedge (v3_waybel_1 \\ & (k1_waybel_1 X0 X1 X2 X3) X0 X1)))))) \end{aligned} \quad (14)$$

Assume the following.

$$\forall X0. ((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow ((v6_waybel23 X1 X0) \Rightarrow (\neg v1_xboole_0 X1))) \quad (15)$$

Assume the following.

$$\forall X0. (l1_orders_2 X0) \Rightarrow ((v1_lattice3 X0) \Rightarrow (\neg v2_struct_0 X0)) \quad (16)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\ & X0) \wedge ((v1_yellow_0 X0) \wedge ((v1_lattice3 X0) \wedge ((v3_waybel_3 X0) \wedge \\ & (l1_orders_2 X0)))))) \Rightarrow (\forall X1.((v6_waybel23 X1 X0) \wedge (m1_waybel23 \\ X1 X0)) \Rightarrow ((v4_waybel_1 (k3_waybel23 X0 (k5_yellow_0 X0 X1)) (k2_yellow_1 \\ (k7_waybel_0 (k5_yellow_0 X0 X1))) X0) \wedge (v5_waybel_1 (k5_waybel23 \\ X0 X1) (k2_yellow_1 (k7_waybel_0 (k5_yellow_0 X0 X1))) X0))) \end{aligned}$$