

l29_waybel13
(TMZqmjTnZ1W4jkgZv6rva5cyJRN2qze1jJ8)

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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 $l1_orders_2 : \iota \Rightarrow o$ be given. Let $v4_yellow_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_yellow_1 : \iota \Rightarrow \iota$ be given. Let $m1_yellow_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v7_yellow_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r5_waybel_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v7_waybel_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v22_waybel_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_yellow_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $g1_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_orders_2 : \iota \Rightarrow \iota$ be given. Let $v3_lattice3 : \iota \Rightarrow o$ be given. Let $k6_waybel10 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_orders_2 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(l1_orders_2 X0) \Rightarrow (\forall X1.(l1_orders_2 X1) \Rightarrow (\forall X2. \\ & (l1_orders_2 X2) \Rightarrow (((r5_waybel_1 X0 X1) \wedge (r5_waybel_1 X1 X2)) \Rightarrow \\ & (r5_waybel_1 X0 X2)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. \\ & ((\neg v2_struct_0 X1) \wedge (l1_orders_2 X1)) \Rightarrow ((g1_orders_2 (u1_struct_0 \\ & X0) (u1_orders_2 X0) = g1_orders_2 (u1_struct_0 X1) (u1_orders_2 \\ & X1)) \Rightarrow (r5_waybel_1 X0 X1))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\ & X0) \wedge ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge ((v3_lattice3 X0) \wedge \\ & (l1_orders_2 X0))))))) \Rightarrow (\forall X1.((v4_yellow_0 X1 X0) \wedge ((v7_yellow_0 \\ & X1 X0) \wedge (m1_yellow_0 X1 X0))) \Rightarrow (k1_yellow_2 X0 X0 (k6_waybel10 X0 \\ & X1) = g1_orders_2 (u1_struct_0 X1) (u1_orders_2 X1))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.(v1_orders_2 (k3_yellow_1 X0)) \wedge (v3_lattice3 (k3_yellow_1 X0)) \quad (4)$$

Assume the following.

$$\forall X0.(\neg v2_struct_0 (k3_yellow_1 X0)) \wedge ((v1_orders_2 (k3_yellow_1 X0)) \wedge ((v3_orders_2 (k3_yellow_1 X0)) \wedge ((v4_orders_2 (k3_yellow_1 X0)) \wedge (v5_orders_2 (k3_yellow_1 X0)))))) \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \wedge (((\neg v2_struct_0 X1) \wedge (l1_orders_2 X1)) \wedge ((v1_funct_1 X2) \wedge \\ & ((v1_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 X1)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1)))))))))) \Rightarrow \\ & ((\neg v2_struct_0 (k1_yellow_2 X0 X1 X2)) \wedge ((v1_orders_2 (k1_yellow_2 X0 X1 X2)) \wedge (v4_yellow_0 (k1_yellow_2 X0 X1 X2) X1))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge \\ & ((v5_orders_2 X0) \wedge ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge ((v3_lattice3 X0) \wedge (l1_orders_2 X0))))))) \wedge ((v4_yellow_0 X1 X0) \wedge ((v7_yellow_0 X1 X0) \wedge ((v4_waybel_0 X1 X0) \wedge (m1_yellow_0 X1 X0)))))) \Rightarrow ((v1_funct_1 (k6_waybel10 X0 X1)) \wedge ((v1_funct_2 (k6_waybel10 X0 X1) (u1_struct_0 X0) (u1_struct_0 X0)) \wedge (v22_waybel_0 (k6_waybel10 X0 X1) X0 X0))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge \\ & ((v5_orders_2 X0) \wedge ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge ((v3_lattice3 X0) \wedge (l1_orders_2 X0))))))) \wedge ((v4_yellow_0 X1 X0) \wedge ((v7_yellow_0 X1 X0) \wedge (m1_yellow_0 X1 X0)))))) \Rightarrow ((v1_funct_1 (k6_waybel10 X0 X1)) \wedge ((v1_funct_2 (k6_waybel10 X0 X1) (u1_struct_0 X0) (u1_struct_0 X0)) \wedge (v7_waybel_1 (k6_waybel10 X0 X1) X0))) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow (\forall X1.(m1_yellow_0 X1 X0) \Rightarrow (l1_orders_2 X1)) \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \wedge \\ & (m1_yellow_0 X1 X0)) \Rightarrow ((v1_funct_1 (k6_waybel10 X0 X1)) \wedge ((v1_funct_2 (k6_waybel10 X0 X1) (u1_struct_0 X0) (u1_struct_0 X0)) \wedge (m1_subset_1 (k6_waybel10 X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0)))))) \end{aligned} \quad (10)$$

Assume the following.

$$\forall X0.(v1_orders_2 (k3_yellow_1 X0)) \wedge (l1_orders_2 (k3_yellow_1 X0)) \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \wedge ((\neg v2_struct_0 X1) \wedge (l1_orders_2 X1)) \wedge ((v1_funct_1 X2) \wedge \\ & ((v1_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 X1)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1)))))) \Rightarrow \\ & ((v1_orders_2 (k1_yellow_2 X0 X1 X2)) \wedge ((v4_yellow_0 (k1_yellow_2 X0 X1 X2) X1) \wedge (m1_yellow_0 (k1_yellow_2 X0 X1 X2) X1))) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 X0) \wedge ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge ((v3_lattice3 X0) \wedge \\ & (l1_orders_2 X0)))))) \Rightarrow (\forall X1.(m1_yellow_0 X1 X0) \Rightarrow ((v7_yellow_0 X1 X0) \Rightarrow (\neg v2_struct_0 X1))) \end{aligned} \quad (13)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow (((\neg v2_struct_0 X0) \wedge (v3_lattice3 X0)) \Rightarrow ((\neg v2_struct_0 X0) \wedge ((v1_lattice3 X0) \wedge (v2_lattice3 X0)))) \quad (14)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow ((v1_orders_2 X0) \Rightarrow (X0 = g1_orders_2 (u1_struct_0 X0) (u1_orders_2 X0))) \quad (15)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 X0) \wedge ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge (l1_orders_2 X0)))))) \Rightarrow \\ & (\neg(\exists X1.\exists X2.((v4_yellow_0 X2 (k3_yellow_1 X1)) \wedge (m1_yellow_0 X2 (k3_yellow_1 X1)) \wedge ((v7_yellow_0 X2 (k3_yellow_1 X1)) \wedge ((v4_waybel_0 X2 (k3_yellow_1 X1)) \wedge (r5_waybel_1 X0 X2)))))) \wedge \\ & (\forall X1.\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 X2 (u1_struct_0 (k3_yellow_1 X1)) (u1_struct_0 (k3_yellow_1 X1))) \wedge ((v7_waybel_1 X2 (k3_yellow_1 X1)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 (k3_yellow_1 X1)) (u1_struct_0 (k3_yellow_1 X1)))))) \Rightarrow \\ & (\neg(v22_waybel_0 X2 (k3_yellow_1 X1) (k3_yellow_1 X1)) \wedge (r5_waybel_1 X0 (k1_yellow_2 (k3_yellow_1 X1) (k3_yellow_1 X1) X2)))))) \end{aligned}$$