

158_waybel23 (TMdcXuaMiCeRxY- cVDfR8EfonKq6PwhbkPqb)

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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 $v1_yellow_0 : \iota \Rightarrow o$ be given. Let $v1_lattice3 : \iota \Rightarrow o$ be given. Let $v2_lattice3 : \iota \Rightarrow o$ be given. Let $v3_waybel_3 : \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $v2_waybel23 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k3_yellow_0 : \iota \Rightarrow \iota$ be given. Let $r1_waybel_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r3_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_waybel_8 : \iota \Rightarrow \iota$ be given. Let $m1_waybel23 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $r1_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_yellow_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_orders_2 : \iota \Rightarrow o$ be given. Let $v4_yellow_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_waybel_3 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_orders_2 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\ & X0) \wedge ((v1_yellow_0 X0) \wedge ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge \\ & ((v3_waybel_3 X0) \wedge (l1_orders_2 X0)))))))) \Rightarrow (\forall X1. ((v2_waybel23 \\ & X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow ((k3_yellow_0 \\ & X0 \in X1) \Rightarrow ((m1_waybel23 X1 X0) \Leftrightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X3. (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\neg (r1_waybel_3 \\ & X0 X2 X3) \wedge (\forall X4. (m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow (\neg (X4 \in \\ & X1) \wedge ((r3_orders_2 X0 X2 X4) \wedge (r1_waybel_3 X0 X4 X3)))))))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\ & X0) \wedge ((v1_yellow_0 X0) \wedge ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge \\ & ((v3_waybel_3 X0) \wedge (l1_orders_2 X0))))))) \Rightarrow (\forall X1.((v2_waybel23 \\ & X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow ((m1_waybel23 \\ & X1 X0) \Leftrightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\neg(\neg r3_orders_2 X0 X3 X2) \wedge (\\ & \forall X4.(m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow (\neg(X4 \in X1) \wedge ((\neg r3_orders_2 \\ & X0 X4 X2) \wedge (r1_waybel_3 X0 X4 X3)))))))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 (k1_zfmisc_1 X1)) \Leftrightarrow (r1_tarski X0 X1) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge ((v5_orders_2 \\ & X0) \wedge (l1_orders_2 X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow ((r1_waybel_3 \\ & X0 X1 X2) \Rightarrow (r3_orders_2 X0 X1 X2)))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge ((v3_orders_2 \\ & X0) \wedge (l1_orders_2 X0))) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge (\\ & m1_subset_1 X2 (u1_struct_0 X0)))) \Rightarrow ((r3_orders_2 X0 X1 X2) \Leftrightarrow (r1_orders_2 \\ & X0 X1 X2)) \end{aligned} \quad (6)$$

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.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge (l1_orders_2 \\ & X0))) \Rightarrow ((v1_orders_2 (k1_waybel_8 X0) \wedge ((v4_yellow_0 (k1_waybel_8 \\ & X0) X0) \wedge (m1_yellow_0 (k1_waybel_8 X0) X0))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0. (l1_orders_2 X0) \Rightarrow ((v5_orders_2 X0) \Leftrightarrow (\forall X1. (\\ & m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. (m1_subset_1 X2 \\ & (u1_struct_0 X0)) \Rightarrow ((r1_orders_2 X0 X1 X2) \wedge (r1_orders_2 X0 X2 \\ & X1)) \Rightarrow (X1 = X2)))) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0. \forall X1. (r1_tarski X0 X1) \Leftrightarrow (\forall X2. (X2 \in X0) \Rightarrow (X2 \in X1)) \quad (10)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge (l1_orders_2 X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow ((v1_waybel_3 X1 X0) \Leftrightarrow (r1_waybel_3 X0 X1 X1))) \quad (11)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge (l1_orders_2 X0))) \Rightarrow (\forall X1.((v1_orders_2 X1) \wedge ((v4_yellow_0 X1 X0) \wedge (m1_yellow_0 X1 X0))) \Rightarrow ((X1 = k1_waybel_8 X0) \Leftrightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow ((X2 \in u1_struct_0 X1) \Leftrightarrow (v1_waybel_3 X2 X0)))))) \quad (12)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow (\forall X1.(l1_orders_2 X1) \Rightarrow ((m1_yellow_0 X1 X0) \Leftrightarrow ((r1_tarski (u1_struct_0 X1) (u1_struct_0 X0)) \wedge (r1_tarski (u1_orders_2 X1) (u1_orders_2 X0)))))) \quad (13)$$

Assume the following.

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

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow ((v1_lattice3 X0) \Rightarrow (\neg v2_struct_0 X0)) \quad (15)$$

Theorem 1

$$\forall X0.(((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 X0) \wedge ((v1_yellow_0 X0) \wedge ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge ((v3_waybel_3 X0) \wedge (l1_orders_2 X0)))))))))) \Rightarrow (\forall X1.(((v2_waybel23 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow (((k3_yellow_0 X0 \in X1) \wedge (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\neg (r1_waybel_3 X0 X2 X3) \wedge (\forall X4.(m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow (\neg (X4 \in X1) \wedge ((r3_orders_2 X0 X2 X4) \wedge (r1_waybel_3 X0 X4 X3)))))))))) \Rightarrow ((r1_tarski (u1_struct_0 (k1_waybel_8 X0)) X1) \wedge (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\neg (\neg r3_orders_2 X0 X3 X2) \wedge (\forall X4.(m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow (\neg (X4 \in X1) \wedge ((\neg r3_orders_2 X0 X4 X2) \wedge (r3_orders_2 X0 X4 X3))))))))))))))$$