

t36_waybel_3 (TMZVcCFeZMN- rEVnyrMct5yE7pSELxG5MjDd)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v2_pre_topc : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k2_yellow_1 : \iota \Rightarrow \iota$ be given. Let $u1_pre_topc : \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $v1_waybel_3 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_compts_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_tops_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_setfam_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $k3_tarski : \iota \Rightarrow \iota$ be given. Let $r1_waybel_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_orders_2 : \iota \Rightarrow o$ be given. 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 $l1_orders_2 : \iota \Rightarrow o$ be given. Let $m1_setfam_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 (k1_zfmisc_1 X1)) \Leftrightarrow (r1_tarski X0 X1) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc X0))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 (k2_yellow_1 (u1_pre_topc X0)))) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 (k2_yellow_1 (u1_pre_topc X0)))) \Rightarrow ((\forall X3. (m1_subset_1 X3 (k1_zfmisc_1 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow (\neg (v1_tops_2 X3 X0) \wedge ((r1_tarski X2 (k5_setfam_1 (u1_struct_0 X0) X3)) \wedge (\forall X4. ((v1_finset_1 X4) \wedge (m1_subset_1 X4 (k1_zfmisc_1 X3))) \Rightarrow (\neg r1_tarski X1 (k3_tarski X4)))))) \Rightarrow (r1_waybel_3 (k2_yellow_1 (u1_pre_topc X0)) X1 X2)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k2_yellow_1 \\ (u1_pre_topc X0)))) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 \\ (k2_yellow_1 (u1_pre_topc X0)))) \Rightarrow ((r1_waybel_3 (k2_yellow_1 \\ (u1_pre_topc X0)) X1 X2) \Rightarrow (\forall X3.(m1_subset_1 X3 (k1_zfmisc_1 \\ (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow (\neg (v1_tops_2 X3 X0) \wedge ((r1_tarski \\ X2 (k5_setfam_1 (u1_struct_0 X0) X3)) \wedge (\forall X4.((v1_finset_1 \\ X4) \wedge (m1_subset_1 X4 (k1_zfmisc_1 X3))) \Rightarrow (\neg r1_tarski X1 (k3_tarski \\ X4)))))))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((r1_tarski X0 X1) \wedge (r1_tarski \\ X1 X2)) \Rightarrow (r1_tarski X0 X2) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 \\ X0))) \Rightarrow (k5_setfam_1 X0 X1 = k3_tarski X1) \quad (5)$$

Assume the following.

$$\forall X0. (\neg v1_xboole_0 X0) \Rightarrow ((\neg v2_struct_0 (k2_yellow_1 X0)) \wedge \\ (v1_orders_2 (k2_yellow_1 X0))) \quad (6)$$

Assume the following.

$$\forall X0. (v1_orders_2 (k2_yellow_1 X0)) \wedge ((v3_orders_2 (k2_yellow_1 \\ X0)) \wedge ((v4_orders_2 (k2_yellow_1 X0)) \wedge (v5_orders_2 (k2_yellow_1 \\ X0)))) \quad (7)$$

Assume the following.

$$\forall X0. ((v2_pre_topc X0) \wedge (l1_pre_topc X0)) \Rightarrow (\neg v1_xboole_0 \\ (u1_pre_topc X0)) \quad (8)$$

Assume the following.

$$\forall X0. (v1_orders_2 (k2_yellow_1 X0)) \wedge (l1_orders_2 (k2_yellow_1 \\ X0)) \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0. (l1_pre_topc X0) \Rightarrow (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 \\ (u1_struct_0 X0))) \Rightarrow ((v2_compts_1 X1 X0) \Leftrightarrow (\forall X2. (m1_subset_1 \\ X2 (k1_zfmisc_1 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow (\neg (m1_setfam_1 \\ X2 X1) \wedge ((v1_tops_2 X2 X0) \wedge (\forall X3. (m1_subset_1 X3 (k1_zfmisc_1 \\ (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow (\neg (r1_tarski X3 X2) \wedge ((m1_setfam_1 \\ X3 X1) \wedge (v1_finset_1 X3)))))))))) \end{aligned} \quad (10)$$

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.

$$\forall X0.\forall X1.(m1_setfam_1 X1 X0) \Leftrightarrow (r1_tarski X0 (k3_tarski X1)) \quad (12)$$

Theorem 1

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k2_yellow_1 (u1_pre_topc X0)))) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow ((X1 = X2) \Rightarrow ((v1_waybel_3 X1 (k2_yellow_1 (u1_pre_topc X0))) \Leftrightarrow (v2_compts_1 X2 X0))))))$$