

t11_waybel_7 (TMdpB-
vQAWQq3aAEjWTMUJi6FtyETkCgybuw)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v13_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_yellow_1 : \iota \Rightarrow \iota$ 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 $v2_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $r1_tarSKI : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k8_setfam_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ 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 $v2_lattice3 : \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $k2_yellow_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_setfam_1 : \iota \Rightarrow \iota$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v2_yellow_0 : \iota \Rightarrow o$ be given. Let $k4_yellow_0 : \iota \Rightarrow \iota$ be given. Let $k1_setfam_1 : \iota \Rightarrow \iota$ be given. Let $k6_setfam_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_orders_2 : \iota \Rightarrow o$ be given. Let $v11_waybel_1 : \iota \Rightarrow o$ be given. Let $v1_lattice3 : \iota \Rightarrow o$ be given. Let $v3_yellow_0 : \iota \Rightarrow o$ be given. Let $v2_waybel_1 : \iota \Rightarrow o$ be given. Let $v10_waybel_1 : \iota \Rightarrow o$ be given. Let $v9_waybel_1 : \iota \Rightarrow o$ be given. Let $v1_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\ X0) \wedge ((v2_lattice3 X0) \wedge (l1_orders_2 X0)))))) \Rightarrow (\forall X1.((\neg \\ v1_xboole_0 X1) \wedge ((v13_waybel_0 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ (u1_struct_0 X0)))))) \Rightarrow ((v2_waybel_0 X1 X0) \Leftrightarrow (\forall X2.((v1_finset_1 \\ X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 X1)))) \Rightarrow ((X2 \neq k1_xboole_0) \Rightarrow (\\ k2_yellow_0 X0 X2 \in X1)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X0 (k1_zfmisc_1 X1)) \Leftrightarrow (r1_tarSKI X0 X1) \quad (3)$$

Assume the following.

$$\forall X0.u1_struct_0 (k3_yellow_1 X0) = k9_setfam_1 X0 \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge ((v4_orders_2 \\ & X0) \wedge ((v5_orders_2 X0) \wedge ((v2_yellow_0 X0) \wedge (l1_orders_2 X0)))))) \Rightarrow \\ & (\forall X1.((\neg v1_xboole_0 X1) \wedge ((v2_waybel_0 X1 X0) \wedge ((v13_waybel_0 \\ & X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0)))))) \Rightarrow (k4_yellow_0 \\ & X0 \in X1)) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ & (u1_struct_0 (k3_yellow_1 X0)))) \Rightarrow (k2_yellow_0 (k3_yellow_1 \\ & X0) X1 = k1_setfam_1 X1) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((r1_tarski X0 X1) \wedge (r1_tarski \\ & X1 X2)) \Rightarrow (r1_tarski X0 X2) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0. k4_yellow_0 (k3_yellow_1 X0) = X0 \quad (8)$$

Assume the following.

$$\forall X0. k9_setfam_1 X0 = k1_zfmisc_1 X0 \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 \\ & X0))) \Rightarrow (k6_setfam_1 X0 X1 = k1_setfam_1 X1) \end{aligned} \quad (10)$$

Assume the following.

$$\forall X0. \exists X1. (m1_subset_1 X1 (k1_zfmisc_1 X0)) \wedge (v1_xboole_0 X1) \quad (11)$$

Assume the following.

$$\exists X0. v1_xboole_0 X0 \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v2_struct_0 (k3_yellow_1 X0)) \wedge ((v1_orders_2 (k3_yellow_1 \\ & X0)) \wedge ((v3_orders_2 (k3_yellow_1 X0)) \wedge ((v4_orders_2 (k3_yellow_1 \\ & X0)) \wedge (v5_orders_2 (k3_yellow_1 X0)))))) \end{aligned} \quad (13)$$

Assume the following.

$$\forall X0. (v1_orders_2 (k3_yellow_1 X0)) \wedge (v11_waybel_1 (k3_yellow_1 X0)) \quad (14)$$

Assume the following.

$$\forall X0.(v1_orders_2 (k3_yellow_1 X0)) \wedge (l1_orders_2 (k3_yellow_1 X0)) \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 X0))) \Rightarrow (((X1 \neq k1_xboole_0) \Rightarrow (k8_setfam_1 X0 X1 = k6_setfam_1 X0 X1)) \wedge ((X1 = k1_xboole_0) \Rightarrow (k8_setfam_1 X0 X1 = X0))) \quad (16)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow (((\neg v2_struct_0 X0) \wedge (v11_waybel_1 X0)) \Rightarrow ((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 X0) \wedge ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge ((v3_yellow_0 X0) \wedge ((v2_waybel_1 X0) \wedge (v10_waybel_1 X0)))))))))) \quad (17)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow (((\neg v2_struct_0 X0) \wedge (v9_waybel_1 X0)) \Rightarrow ((\neg v2_struct_0 X0) \wedge (v2_yellow_0 X0))) \quad (18)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow ((v1_xboole_0 X1) \Rightarrow ((v1_waybel_0 X1 X0) \wedge (v2_waybel_0 X1 X0)))) \quad (19)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow (((\neg v2_struct_0 X0) \wedge (v11_waybel_1 X0)) \Rightarrow ((\neg v2_struct_0 X0) \wedge (v9_waybel_1 X0))) \quad (20)$$

Theorem 1

$$\forall X0.\forall X1.((\neg v1_xboole_0 X1) \wedge ((v13_waybel_0 X1 (k3_yellow_1 X0)) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 (k3_yellow_1 X0)))))) \Rightarrow ((v2_waybel_0 X1 (k3_yellow_1 X0)) \Leftrightarrow (\forall X2. ((v1_finset_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k1_zfmisc_1 X0)))) \Rightarrow ((r1_tarski X2 X1) \Rightarrow (k8_setfam_1 X0 X2 \in X1))))$$