

t13_waybel21 (TMP- niVgVbPcVJ3AL8YLGL7pqXSEThkAvEAJ)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $v4_yellow_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v7_yellow_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v8_yellow_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_yellow_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k2_yellow_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_yellow_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $r1_yellow_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2_yellow_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow ((v4_yellow_0 X0 X0) \wedge (m1_yellow_0 X0 X0)) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (2)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\neg v1_xboole_0 (u1_struct_0 X0)) \quad (3)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow (l1_struct_0 X0) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(l1_orders_2 X0) \Rightarrow (m1_subset_1 (k2_yellow_0 X0 X1) (u1_struct_0 X0)) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(l1_orders_2 X0) \Rightarrow (m1_subset_1 (k1_yellow_0 X0 X1) (u1_struct_0 X0)) \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. \\ & (m1_yellow_0 X1 X0) \Rightarrow ((v8_yellow_0 X1 X0) \Leftrightarrow (\forall X2.(m1_subset_1 \\ & X2 (k1_zfmisc_1 (u1_struct_0 X1))) \Rightarrow ((r1_yellow_0 X0 X2) \Rightarrow (k1_yellow_0 \\ & X0 X2 \in u1_struct_0 X1)))))) \end{aligned} \tag{7}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. \\ & (m1_yellow_0 X1 X0) \Rightarrow ((v7_yellow_0 X1 X0) \Leftrightarrow (\forall X2.(m1_subset_1 \\ & X2 (k1_zfmisc_1 (u1_struct_0 X1))) \Rightarrow ((r2_yellow_0 X0 X2) \Rightarrow (k2_yellow_0 \\ & X0 X2 \in u1_struct_0 X1)))))) \end{aligned} \tag{8}$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow ((v4_yellow_0 \\ & X0 X0) \wedge ((v7_yellow_0 X0 X0) \wedge ((v8_yellow_0 X0 X0) \wedge (m1_yellow_0 \\ & X0 X0)))) \end{aligned}$$