

t15_orders_2

(TMYvcMtEneq7MhrF8ts6bAMe5jonEmBnk9B)

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Let $v2_struct_0 : \iota \Rightarrow o$ 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 $k1_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $r2_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. r1_tarski\ k1_xboole_0\ X0 \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1\ X0\ X1) \Rightarrow ((v1_xboole_0\ X1) \vee (X0 \in X1)) \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((l1_orders_2\ X0) \wedge ((m1_subset_1\ X1\ (u1_struct_0\ X0)) \wedge (m1_subset_1\ X2\ (u1_struct_0\ X0)))) \Rightarrow (\neg r2_orders_2\ X0\ X1\ X1) \tag{3}$$

Assume the following.

$$\forall X0. ((\neg v2_struct_0\ X0) \wedge (l1_struct_0\ X0)) \Rightarrow (\neg v1_xboole_0\ (k2_struct_0\ X0)) \tag{4}$$

Assume the following.

$$\forall X0. (l1_orders_2\ X0) \Rightarrow (l1_struct_0\ X0) \tag{5}$$

Assume the following.

$$\forall X0. (l1_struct_0\ X0) \Rightarrow (m1_subset_1\ (k2_struct_0\ X0)\ (k1_zfmisc_1\ (u1_struct_0\ X0))) \tag{6}$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge ((v4_orders_2 \\ X0) \wedge ((v5_orders_2 X0) \wedge (l1_orders_2 X0)))))) \Rightarrow (\forall X1.(m1_subset_1 \\ X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (k1_orders_2 X0 X1 = ReplSep \\ (toset (\lambda X2 : \iota.m1_subset_1 X2 (u1_struct_0 X0))) (\lambda X2 : \\ \iota.\forall X3.(m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow ((X3 \in X1) \Rightarrow (\\ r2_orders_2 X0 X3 X2)))) (\lambda X2 : \iota.X2))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(r1_tarski X0 X1) \Leftrightarrow (\forall X2.(X2 \in X0) \Rightarrow (X2 \in X1)) \quad (8)$$

Assume the following.

$$\forall X0.(l1_struct_0 X0) \Rightarrow (k2_struct_0 X0 = u1_struct_0 X0) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.(X0 = X1) \Leftrightarrow ((r1_tarski X0 X1) \wedge (r1_tarski X1 X0)) \quad (10)$$

Theorem 1

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge ((v4_orders_2 \\ X0) \wedge ((v5_orders_2 X0) \wedge (l1_orders_2 X0)))))) \Rightarrow (k1_orders_2 X0 \\ (k2_struct_0 X0) = k1_xboole_0) \end{aligned}$$