

t10_orders_3

(TMK4sB7P4133XB4ecvrz9L6zSKA6iioJCDq)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v4_orders_3 : \iota \Rightarrow o$ be given. Let $m1_orders_3 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_orders_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_ens_1 : \iota \Rightarrow \iota$ be given. Let $k2_orders_3 : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. 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 $l1_struct_0 : \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v5_orders_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. \neg (X0 \in X1) \wedge (v1_xboole_0 X1) \quad (1)$$

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.

$$\forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. (m1_subset_1 X1 X0) \Rightarrow (\forall X2. (m1_subset_1 X2 X0) \Rightarrow (r1_tarski (k1_funct_2 X1 X2) (k1_ens_1 X0)))) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \quad (4)$$

Assume the following.

$$\forall X0. ((\neg v1_xboole_0 X0) \wedge (v4_orders_3 X0)) \Rightarrow (\forall X1. (m1_orders_3 X1 X0) \Leftrightarrow (m1_subset_1 X1 X0)) \quad (5)$$

Assume the following.

$$\forall X0. ((\neg v1_xboole_0 X0) \wedge (v4_orders_3 X0)) \Rightarrow (\forall X1. (m1_orders_3 X1 X0) \Rightarrow ((\neg v2_struct_0 X1) \wedge ((v3_orders_2 X1) \wedge ((v4_orders_2 X1) \wedge ((v5_orders_2 X1) \wedge (l1_orders_2 X1)))))) \quad (6)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow (l1_struct_0 X0) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(X1 = k2_orders_3 X0) \Leftrightarrow (\forall X2.(X2 \in X1) \Leftrightarrow (\exists X3.(l1_struct_0 X3) \wedge ((X3 \in X0) \wedge (X2 = u1_struct_0 X3)))) \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_orders_2 X0) \Rightarrow (\forall X1.(l1_orders_2 X1) \Rightarrow (\forall X2. \\ (X2 = k1_orders_3 X0 X1) \Leftrightarrow (\forall X3.(X3 \in X2) \Leftrightarrow (\exists X4.((v1_funct_1 \\ X4) \wedge ((v1_funct_2 X4 (u1_struct_0 X0) (u1_struct_0 X1)) \wedge (m1_subset_1 \\ X4 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1)))))) \wedge \\ ((X3 = X4) \wedge ((X4 \in k1_funct_2 (u1_struct_0 X0) (u1_struct_0 X1)) \wedge \\ (v5_orders_3 X4 X0 X1))))))) \end{aligned} \quad (9)$$

Assume the following.

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

Theorem 1

$$\begin{aligned} \forall X0.((\neg v1_xboole_0 X0) \wedge (v4_orders_3 X0)) \Rightarrow (\forall X1. \\ (m1_orders_3 X1 X0) \Rightarrow (\forall X2.(m1_orders_3 X2 X0) \Rightarrow (r1_tarski \\ (k1_orders_3 X1 X2) (k1_ens_1 (k2_orders_3 X0)))))) \end{aligned}$$