

t22_orders_2

(TMFPxkL75Z2vvjqMeb9pHBfyRMUpsz9opvy)

October 27, 2020

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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $k1_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v6_orders_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $k2_struct_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge (l1_orders_2 \\ & X0))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow ((v6_orders_2 \\ & (k6_domain_1 (u1_struct_0 X0) X1) X0) \wedge (m1_subset_1 (k6_domain_1 \\ & (u1_struct_0 X0) X1) (k1_zfmisc_1 (u1_struct_0 X0)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge (m1_subset_1 X1 X0)) \Rightarrow (k6_domain_1 X0 X1 = k1_tarski X1) \quad (2)$$

Assume the following.

$$\forall X0. ((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\neg v1_xboole_0 (k2_struct_0 X0)) \quad (3)$$

Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge ((v4_orders_2 \\ & X0) \wedge ((v5_orders_2 X0) \wedge (l1_orders_2 X0)))))) \Rightarrow (\forall X1. (m1_subset_1 \\ & X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (k1_orders_2 X0 X1 = \text{ReplSep} \\ & (\text{toset } (\lambda X2 : \iota. m1_subset_1 X2 (u1_struct_0 X0))) (\lambda X2 : \\ & \iota. \forall X3. (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow ((X3 \in X1) \Rightarrow (\\ & r2_orders_2 X0 X3 X2)))) (\lambda X2 : \iota. X2))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.(l1_struct_0 X0) \Rightarrow (k2_struct_0 X0 = u1_struct_0 X0) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.(X1 = k1_tarski X0) \Leftrightarrow (\forall X2.(X2 \in X1) \Leftrightarrow (X2 = X0)) \quad (7)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge ((v4_orders_2 \\ & X0) \wedge ((v5_orders_2 X0) \wedge (l1_orders_2 X0)))))) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 \\ & X0)) \Rightarrow ((r2_orders_2 X0 X1 X2) \Leftrightarrow (X2 \in k1_orders_2 X0 (k6_domain_1 \\ & (u1_struct_0 X0) X1)))))) \end{aligned}$$