

t8_robbins3 (TMP-
KFfSY8qTuufLHkGGjqYSAvKjC7Gz38Pt)

October 27, 2020

Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $r1_relat_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_orders_2 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v4_relat_2 : \iota \Rightarrow o$ be given. Let $v8_relat_2 : \iota \Rightarrow o$ be given. Let $v3_orders_2 : \iota \Rightarrow o$ be given. Let $v5_orders_2 : \iota \Rightarrow o$ be given. Let $v4_orders_2 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r4_relat_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1_relat_1 X0) \Rightarrow ((v4_relat_2 X0) \Leftrightarrow (\forall X1.\forall X2. \\ & ((k4_tarski X1 X2 \in X0) \wedge (k4_tarski X2 X1 \in X0)) \Rightarrow (X1 = X2))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow (m1_subset_1 (u1_orders_2 X0) (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0)))) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_relat_1 X0) \Rightarrow (\forall X1.(r4_relat_2 X0 X1) \Leftrightarrow (\forall X2. \\ & \forall X3.((X2 \in X1) \wedge ((X3 \in X1) \wedge ((k4_tarski X2 X3 \in X0) \wedge (k4_tarski \\ & X3 X2 \in X0)))) \Rightarrow (X2 = X3))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow ((v5_orders_2 X0) \Leftrightarrow (r4_relat_2 (u1_orders_2 X0) (u1_struct_0 X0))) \quad (4)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow ((v3_orders_2 X0) \Leftrightarrow (r1_relat_2 (u1_orders_2 X0) (u1_struct_0 X0))) \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow ((v4_orders_2 \\ & X0) \Leftrightarrow ((v8_relat_2 (u1_orders_2 X0)) \wedge (m1_subset_1 (u1_orders_2 \\ & X0) (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0)))))) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(v1_relat_1 X2) \quad (7)$$

Theorem 1

$$\forall X0.((\neg v2_struct_0 X0)\wedge(l1_orders_2 X0))\Rightarrow(((r1_relat_2 (u1_orders_2 X0) (u1_struct_0 X0))\wedge((v4_relat_2 (u1_orders_2 X0))\wedge(v8_relat_2 (u1_orders_2 X0))))\Rightarrow((v3_orders_2 X0)\wedge((v5_orders_2 X0)\wedge(v4_orders_2 X0))))$$