

t56_roughs_1

(TMW6Kpk21qPSJmwA33HdG6TNkvMQRDdXUph)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v8_struct_0 : \iota \Rightarrow o$ be given. Let $v2_roughs_1 : \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k3_roughs_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $k6_roughs_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_eqrel_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_orders_2 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v8_struct_0 X0) \wedge ((v2_roughs_1 \\ X0) \wedge (l1_orders_2 X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 \\ (u1_struct_0 X0))) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 \\ X0)) \Rightarrow ((k3_funct_2 (u1_struct_0 X0) k1_numbers (k6_roughs_1 X0 \\ X1) X2 = np_1) \Leftrightarrow (X2 \in k3_roughs_1 X0 X1)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. \\ (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (k3_roughs_1 \\ X0 X1 = ReplSep (toset (\lambda X2 : \iota.m1_subset_1 X2 (u1_struct_0 \\ X0))) (\lambda X2 : \iota.r1_tarski (k6_eqrel_1 (u1_struct_0 X0) (u1_struct_0 \\ X0) (u1_orders_2 X0) X2) X1) (\lambda X2 : \iota.X2)))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(r1_tarski X0 X1) \Leftrightarrow (\forall X2.(X2 \in X0) \Rightarrow (X2 \in X1)) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.(X0 = X1) \Leftrightarrow ((r1_tarski X0 X1) \wedge (r1_tarski X1 X0)) \quad (4)$$

Theorem 1

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (v8_struct_0 X0) \wedge (v2_roughs_1 \\ & X0) \wedge (l1_orders_2 X0))) \Rightarrow (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 \\ & (u1_struct_0 X0))) \Rightarrow (k3_roughs_1 X0 X1 = ReplSep (toset (\lambda X2 : \\ & \iota.m1_subset_1 X2 (u1_struct_0 X0))) (\lambda X2 : \iota.k3_funct_2 \\ & (u1_struct_0 X0) k1_numbers (k6_roughs_1 X0 X1) X2 = np_1) (\lambda X2 : \\ & \iota.X2))) \end{aligned}$$