

t12_cc0sp1
(TMUaZ6Yvk59ddQMoW4bxoa771Lk79gwwEDq)

October 27, 2020

Let $v1_xboole_0 : \iota \Rightarrow o$ 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 $k2_numbers : \iota$ 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 $v1_comseq_2 : \iota \Rightarrow o$ be given. Let $k2_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_cc0sp1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_cc0sp1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. (((v1_funct_1 X2) \wedge \\ & ((v1_funct_2 X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X1)))))) \wedge ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 X0 X1) \wedge (m1_subset_1 \\ & X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \Rightarrow ((r2_funct_2 X0 X1 X2 \\ & X3) \Leftrightarrow (X2 = X3)) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. (X1 \in k2_cc0sp1 X0) \Rightarrow \\ & (\forall X2. ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 k2_numbers) \wedge \\ & (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 k2_numbers)))))) \Rightarrow \\ & ((X2 = k4_cc0sp1 X0 X1) \Leftrightarrow ((X2 = X1) \wedge (v1_comseq_2 (k2_partfun1 X0 \\ & k2_numbers X2 X0)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (k2_cc0sp1 X0 = \text{ReplSep } (\text{toset } (\lambda X1 : \\ & \iota. (v1_funct_1 X1) \wedge ((v1_funct_2 X1 X0 k2_numbers) \wedge (m1_subset_1 \\ & X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 k2_numbers)))))) (\lambda X1 : \iota. \\ & v1_comseq_2 (k2_partfun1 X0 k2_numbers X1 X0)) (\lambda X1 : \iota. X1)) \end{aligned} \tag{3}$$

Theorem 1

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((v1_funct_1 X1) \wedge (\\ & (v1_funct_2 X1 X0 k2_numbers) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 k2_numbers)))))) \Rightarrow ((v1_comseq_2 (k2_partfun1 X0 k2_numbers \\ & X1 X0)) \Rightarrow (r2_funct_2 X0 k2_numbers (k4_cc0sp1 X0 X1) X1)) \end{aligned}$$