

t1_cat_3

(TMXVr1UqFDuY8kFQHDraMT4fPfxXa8tRJgA)

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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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((v1_funct_1 X2) \wedge ((v1_funct_2 \\ & X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \Rightarrow \\ & (\forall X3. ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 X0 X1) \wedge (m1_subset_1 \\ & X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \Rightarrow ((\forall X4. (X4 \in X0) \Rightarrow \\ & (k1_funct_1 X2 X4 = k1_funct_1 X3 X4)) \Rightarrow (r2_relset_1 X0 X1 X2 X3))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((m1_subset_1 X2 \\ & (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \wedge (m1_subset_1 X3 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1)))) \Rightarrow ((r2_relset_1 X0 X1 X2 X3) \Leftrightarrow (X2 = X3)) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. (((v1_funct_1 X2) \wedge \\ & ((v1_funct_2 X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X1)))))) \wedge ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 X0 X1) \wedge (m1_subset_1 \\ & X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \Rightarrow ((r2_funct_2 X0 X1 X2 \\ & X3) \Leftrightarrow (X2 = X3)) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((\neg v1_xboole_0 X0) \wedge \\ & ((\neg v1_xboole_0 X1) \wedge ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 X1) \wedge (\\ & m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))))) \Rightarrow (k10_funct_2 \\ & X0 X1 X2 X3 = k7_partfun1 X1 X2 X3) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. (\neg v1_xboole_0 X1) \Rightarrow \\ & (\forall X2. ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 X1) \wedge (m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \Rightarrow (\forall X3. (X3 \in X0) \Rightarrow \\ & (k10_funct_2 X0 X1 X2 X3 = k1_funct_1 X2 X3))) \end{aligned} \quad (6)$$

Theorem 1

$$\begin{aligned} & \forall X0. \forall X1. (\neg v1_xboole_0 X1) \Rightarrow (\forall X2. ((v1_funct_1 \\ & X2) \wedge ((v1_funct_2 X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X1)))))) \Rightarrow (\forall X3. ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 X0 X1) \wedge \\ & (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \Rightarrow ((\forall X4. \\ & (X4 \in X0) \Rightarrow (k7_partfun1 X1 X2 X4 = k7_partfun1 X1 X3 X4)) \Rightarrow (r2_funct_2 \\ & X0 X1 X2 X3))) \end{aligned}$$