

t5_partfun1
(TMMm3WmRyXvpp2AbirupzTfewwN3Cx5B4AH)

October 27, 2020

Let $v1_funct.1 : \iota \Rightarrow o$ 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 $k1_relset.1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct.1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat.1 : \iota \Rightarrow o$ be given. Let $k9_xtuple.0 : \iota \Rightarrow \iota$ be given. Let $v4_relat.1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5_relat.1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1_subset.1 X1 (k1_zfmisc.1 X2))) \Rightarrow (m1_subset.1 X0 X2) \quad (1)$$

Assume the following.

$$\forall X0. ((v1_relat.1 X0) \wedge (v1_funct.1 X0)) \Rightarrow (\forall X1. ((v1_relat.1 X1) \wedge (v1_funct.1 X1)) \Rightarrow (((k9_xtuple.0 X0 = k9_xtuple.0 X1) \wedge (\forall X2. (X2 \in k9_xtuple.0 X0) \Rightarrow (k1_funct.1 X0 X2 = k1_funct.1 X1 X2))) \Rightarrow (X0 = X1))) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_relat.1 X1) \wedge (v4_relat.1 X1 X0)) \Rightarrow (k1_relset.1 X0 X1 = k9_xtuple.0 X1) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_relat.1 X1) \wedge (v4_relat.1 X1 X0)) \Rightarrow (m1_subset.1 (k1_relset.1 X0 X1) (k1_zfmisc.1 X0)) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1_subset.1 X2 (k1_zfmisc.1 (k2_zfmisc.1 X0 X1))) \Rightarrow ((v4_relat.1 X2 X0) \wedge (v5_relat.1 X2 X1)) \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1_subset.1 X2 (k1_zfmisc.1 (k2_zfmisc.1 X0 X1))) \Rightarrow (v1_relat.1 X2) \quad (6)$$

Theorem 1

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((v1_funct_1 X2) \wedge (m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))) \Rightarrow (\forall X3. ((v1_funct_1 \\ X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))) \Rightarrow (((k1_relset_1 \\ X0 X2 = k1_relset_1 X0 X3) \wedge (\forall X4. (m1_subset_1 X4 X0) \Rightarrow ((X4 \in \\ k1_relset_1 X0 X2) \Rightarrow (k1_funct_1 X2 X4 = k1_funct_1 X3 X4)))) \Rightarrow (X2 = \\ & X3))) \end{aligned}$$