

t60_partfun2
(TMSMnk4b5EHyLcVXhDJJREYmL7a9C6QVJf6)

October 27, 2020

Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_funct_1 : \iota \Rightarrow o$ be given. Let $k2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_funct_1 : \iota \Rightarrow \iota$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow ((v2_funct_1 X0) \Rightarrow \\ & (\forall X1.((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow ((X1 = k2_funct_1 \\ & X0) \Leftrightarrow ((k9_xtuple_0 X1 = k10_xtuple_0 X0) \wedge (\forall X2. \forall X3. \\ & (((X2 \in k10_xtuple_0 X0) \wedge (X3 = k1_funct_1 X1 X2)) \Rightarrow ((X3 \in k9_xtuple_0 \\ & X0) \wedge (X2 = k1_funct_1 X0 X3))) \wedge (((X3 \in k9_xtuple_0 X0) \wedge (X2 = k1_funct_1 \\ & X0 X3)) \Rightarrow ((X2 \in k10_xtuple_0 X0) \wedge (X3 = k1_funct_1 X1 X2))))))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1 X1) \wedge (v5_relat_1 X1 X0)) \Rightarrow (k2_relset_1 X0 X1 = k10_xtuple_0 X1) \quad (2)$$

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.

$$\forall X0. ((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow ((v1_relat_1 (k2_funct_1 X0)) \wedge (v1_funct_1 (k2_funct_1 X0))) \quad (4)$$

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

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0)\Rightarrow(\forall X1.(\neg v1_xboole_0 X1)\Rightarrow \\ & (\forall X2.(m1_subset_1 X2 X0)\Rightarrow(\forall X3.(m1_subset_1 X3 X1)\Rightarrow \\ & (\forall X4.((v1_funct_1 X4)\wedge(m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 \\ X0 X1))))\Rightarrow((v2_funct_1 X4)\Rightarrow(((X3 \in k2_relset_1 X1 X4)\wedge(X2 = k1_funct_1 \\ (k2_funct_1 X4) X3))\Rightarrow((X2 \in k1_relset_1 X0 X4)\wedge(X3 = k1_funct_1 \\ X4 X2)))\wedge(((X2 \in k1_relset_1 X0 X4)\wedge(X3 = k1_funct_1 X4 X2))\Rightarrow((X3 \in \\ k2_relset_1 X1 X4)\wedge(X2 = k1_funct_1 (k2_funct_1 X4) X3)))))))))) \end{aligned}$$