

t53_partfun2

(TMcpu7paCXgExyNENJKhUJZ4K88ti4pLKid)

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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 $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(\neg v1_xboole_0 X1) \Rightarrow \\ & (\forall X2.(m1_subset_1 X2 X0) \Rightarrow (\forall X3.(m1_subset_1 X3 X1) \Rightarrow \\ & (\forall X4.((v1_funct_1 X4) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X1)))) \Rightarrow (((X2 \in k1_relset_1 X0 X4) \wedge (X3 = k7_partfun1 X1 X4 X2)) \Leftrightarrow \\ & (k4_tarski X2 X3 \in X4)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((m1_subset_1 X2 \\ & (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \wedge (m1_subset_1 X3 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1)))) \Rightarrow ((r2_relset_1 X0 X1 X2 X3) \Leftrightarrow (X2 = X3)) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((m1_subset_1 X1 (k1_zfmisc_1 \\ & X0)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 X0))) \Rightarrow (k4_subset_1 X0 X1 X2 = \\ & k2_xboole_0 X1 X2) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((v1_relat_1 X1) \wedge ((v5_relat_1 \\ & X1 X0) \wedge (v1_funct_1 X1))) \Rightarrow (m1_subset_1 (k7_partfun1 X0 X1 X2) X0) \end{aligned} \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1_subset_1 X1 (k1_zfmisc_1 X0))\wedge(m1_subset_1 X2 (k1_zfmisc_1 X0)))\Rightarrow(m1_subset_1 (k4_subset_1 X0 X1 X2) (k1_zfmisc_1 X0)) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.k4_tarski X0 X1 = k2_tarski (k2_tarski X0 X1) (k1_tarski X0) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X2 = k2_xboole_0 X0 X1)\Leftrightarrow(\forall X3.(X3 \in X2)\Leftrightarrow((X3 \in X0)\vee(X3 \in X1))) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow((v4_relat_1 X2 X0)\wedge(v5_relat_1 X2 X1)) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(v1_relat_1 X2) \quad (9)$$

Theorem 1

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0)\Rightarrow(\forall X1.(\neg v1_xboole_0 X1)\Rightarrow \\ & (\forall X2.(m1_subset_1 X2 X0)\Rightarrow(\forall X3.((v1_funct_1 X3)\wedge \\ & (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))\Rightarrow(\forall X4. \\ & ((v1_funct_1 X4)\wedge(m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 X0 \\ & X1))))\Rightarrow(\forall X5.((v1_funct_1 X5)\wedge(m1_subset_1 X5 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1))))\Rightarrow(\neg(X2 \in k1_relset_1 X0 X3)\wedge((r2_relset_1 \\ & X0 X1 X3 (k4_subset_1 (k2_zfmisc_1 X0 X1) X4 X5))\wedge((k7_partfun1 \\ & X1 X3 X2\neq k7_partfun1 X1 X4 X2)\wedge(k7_partfun1 X1 X3 X2\neq k7_partfun1 \\ & X1 X5 X2)))))))))) \end{aligned}$$