

t76_partfun1 (TM-
PqWgJfu21SRw4JLfme8aQKFGDkquD69bG)

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 $k1_xboole_0 : \iota$ be given. Let $r1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_xboole_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Assume the following.

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

Assume the following.

$$\forall X0. \forall X1. \neg(X0 \in X1) \wedge (v1_xboole_0 X1) \quad (2)$$

Assume the following.

$$\forall X0. (v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((v1_funct_1 X2) \wedge (m1_subset_1 \\ & \quad X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))) \Rightarrow (\forall X3. ((v1_funct_1 \\ & \quad X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))) \Rightarrow (\neg((\\ & \quad X1 = k1_xboole_0) \Rightarrow (X0 = k1_xboole_0)) \wedge ((r1_partfun1 X2 X3) \wedge (\forall X4. \\ & \quad ((v1_funct_1 X4) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 X0 \\ & \quad X1)))) \Rightarrow (\neg(v1_partfun1 X4 X0) \wedge ((r1_partfun1 X2 X4) \wedge (r1_partfun1 \\ & \quad X3 X4)))))) \quad (4) \end{aligned}$$

Assume the following.

$$\forall X0. k3_xboole_0 X0 \quad k1_xboole_0 = k1_xboole_0 \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \wedge ((\\ & \quad v1_relat_1 X1) \wedge (v1_funct_1 X1))) \Rightarrow ((r1_partfun1 X0 X1) \Rightarrow (r1_partfun1 \\ & \quad X1 X0)) \quad (6) \end{aligned}$$

Assume the following.

$$\forall X0.\exists X1.(m1_subset_1 X1 (k1_zfmisc_1 X0))\wedge(v1_xboole_0 X1) \quad (7)$$

Assume the following.

$$\exists X0.v1_xboole_0 X0 \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.k3_xboole_0 X0 X0 = X0 \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.(r1_xboole_0 X0 X1)\Leftrightarrow(k3_xboole_0 X0 X1 = k1_xboole_0) \quad (10)$$

Assume the following.

$$\begin{aligned} &\forall X0.\forall X1.\forall X2.((v1_funct_1 X2)\wedge(m1_subset_1 \\ &X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))\Rightarrow(\forall X3.(X3 = k5_partfun1 \\ &X0 X1 X2)\Leftrightarrow(\forall X4.(X4 \in X3)\Leftrightarrow(\exists X5.((v1_funct_1 X5)\wedge(\\ &m1_subset_1 X5 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))\wedge((X5 = X4)\wedge \\ &((v1_partfun1 X5 X0)\wedge(r1_partfun1 X2 X5)))))) \end{aligned} \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X2 = k3_xboole_0 X0 X1)\Leftrightarrow(\forall X3.(X3 \in X2)\Leftrightarrow((X3 \in X0)\wedge(X3 \in X1))) \quad (12)$$

Assume the following.

$$k1_xboole_0 = the (\lambda X0 : \iota.v1_xboole_0 X0) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.(v1_xboole_0 X0)\Rightarrow(\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X1 X0)))\Rightarrow(v1_xboole_0 X2)) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(v1_relat_1 X2) \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.(v1_xboole_0 X0)\Rightarrow(\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(v1_partfun1 X2 X0)) \quad (16)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0)\Rightarrow(v1_funct_1 X0) \quad (17)$$

Theorem 1

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((v1_funct_1 X2) \wedge (m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))) \Rightarrow (\forall X3. ((v1_funct_1 \\ & X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))) \Rightarrow (\neg((\\ & X1 = k1_xboole_0) \Rightarrow (X0 = k1_xboole_0)) \wedge ((r1_partfun1 X2 X3) \wedge (r1_xboole_0 \\ & (k5_partfun1 X0 X1 X2) (k5_partfun1 X0 X1 X3)))))) \end{aligned}$$