

t60_cfunct_1 (TM-
FyGKZYQY4sNfHX5mAdBoL4RNHC8Yu2ib3)

October 27, 2020

Let $v1_xboole_0 : \iota \Rightarrow o$ be given. 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 $k2_numbers : \iota$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k31_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k46_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k19_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_reset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_membered : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((v1_funct_1 X1) \wedge (\\
 & \quad m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 k2_numbers)))) \Rightarrow (\\
 & \quad \forall X2. ((v1_funct_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\
 & \quad X0 k2_numbers)))) \Rightarrow (((v1_partfun1 X1 X0) \wedge (v1_partfun1 X2 X0)) \Rightarrow \\
 & \quad (v1_partfun1 (k2_valued_1 X0 k2_numbers k2_numbers X1 X2) X0)) \wedge \\
 & \quad (((v1_partfun1 X1 X0) \wedge (v1_partfun1 X2 X0)) \wedge (((v1_partfun1 X1 \\
 & \quad X0) \wedge (v1_partfun1 X2 X0)) \Rightarrow (v1_partfun1 (k46_valued_1 X0 k2_numbers \\
 & \quad k2_numbers X1 X2) X0)) \wedge (((v1_partfun1 (k46_valued_1 X0 k2_numbers \\
 & \quad k2_numbers X1 X2) X0) \Rightarrow ((v1_partfun1 X1 X0) \wedge (v1_partfun1 X2 X0))) \wedge \\
 & \quad (((v1_partfun1 X1 X0) \wedge (v1_partfun1 X2 X0)) \Rightarrow (v1_partfun1 (k19_valued_1 \\
 & \quad X0 k2_numbers k2_numbers X1 X2) X0)) \wedge ((v1_partfun1 (k19_valued_1 \\
 & \quad X0 k2_numbers k2_numbers X1 X2) X0) \Rightarrow ((v1_partfun1 X1 X0) \wedge (v1_partfun1 \\
 & \quad X2 X0)))))))))
 \end{aligned}
 \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((v1_funct_1 X1) \wedge (\\
 & \quad m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 k2_numbers)))) \Rightarrow (\\
 & \quad \forall X2. ((v1_funct_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\
 & \quad X0 k2_numbers)))) \Rightarrow (r2_reset_1 X0 k2_numbers (k46_valued_1 X0 \\
 & \quad k2_numbers k2_numbers X1 (k31_valued_1 X0 k2_numbers X2)) (k2_valued_1 \\
 & \quad X0 k2_numbers k2_numbers X1 X2))))
 \end{aligned}
 \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\wedge(m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))\Rightarrow((r2_relset_1 X0 X1 X2 X3)\Leftrightarrow(X2 = X3)) \quad (3)$$

Assume the following.

$$v1_membered k2_numbers \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.((v1_membered X1)\wedge((v1_membered X2)\wedge(((v1_funct_1 X3)\wedge(m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))\wedge((v1_funct_1 X4)\wedge(m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 X0 X2))))))))\Rightarrow((v1_funct_1 (k46_valued_1 X0 X1 X2 X3 X4))\wedge(m1_subset_1 (k46_valued_1 X0 X1 X2 X3 X4) (k1_zfmisc_1 (k2_zfmisc_1 X0 k2_numbers)))) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1_membered X1)\wedge((v1_funct_1 X2)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))\Rightarrow((v1_funct_1 (k31_valued_1 X0 X1 X2))\wedge(m1_subset_1 (k31_valued_1 X0 X1 X2) (k1_zfmisc_1 (k2_zfmisc_1 X0 k2_numbers)))) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.((v1_membered X1)\wedge((v1_membered X2)\wedge(((v1_funct_1 X3)\wedge(m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))\wedge((v1_funct_1 X4)\wedge(m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 X0 X2))))))))\Rightarrow((v1_funct_1 (k2_valued_1 X0 X1 X2 X3 X4))\wedge(m1_subset_1 (k2_valued_1 X0 X1 X2 X3 X4) (k1_zfmisc_1 (k2_zfmisc_1 X0 k2_numbers)))) \quad (7)$$

Theorem 1

$$\forall X0.(\neg v1_xboole_0 X0)\Rightarrow(\forall X1.((v1_funct_1 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 k2_numbers))))\Rightarrow((v1_partfun1 X1 X0)\Leftrightarrow(v1_partfun1 (k31_valued_1 X0 k2_numbers X1) X0)))$$