

t79_cfunct_1

(TMRJ1LsRQUdSSDSysVV6zGh2vCjRUUuEULd)

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 $v3_funct_1 : \iota \Rightarrow o$ be given. Let $k2_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k25_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_complex1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_membered : \iota \Rightarrow o$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k24_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_valued_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((v1_funct_1 X1) \wedge (\\
 & \quad m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 k2_numbers)))) \Rightarrow (\\
 & \quad \forall X2. (m1_subset_1 X2 k2_numbers) \Rightarrow ((k1_relset_1 X0 (k25_valued_1 \\
 & \quad X0 k2_numbers X1 X2) = k1_relset_1 X0 X1) \wedge (\forall X3. (m1_subset_1 \\
 & \quad X3 X0) \Rightarrow ((X3 \in k1_relset_1 X0 (k25_valued_1 X0 k2_numbers X1 X2)) \Rightarrow \\
 & \quad (k7_partfun1 k2_numbers (k25_valued_1 X0 k2_numbers X1 X2) X3 = \\
 & \quad k9_complex1 X2 (k7_partfun1 k2_numbers X1 X3))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. \forall X1. (\neg v1_xboole_0 X1) \Rightarrow (\forall X2. (\neg v1_xboole_0 \\
 & \quad X2) \Rightarrow (\forall X3. ((v1_funct_1 X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1 \\
 & \quad (k2_zfmisc_1 X2 X1)))) \Rightarrow ((v3_funct_1 (k2_partfun1 X2 X1 X3 X0)) \Leftrightarrow \\
 & \quad (\exists X4. (m1_subset_1 X4 X1) \wedge (\forall X5. (m1_subset_1 X5 X2) \Rightarrow \\
 & \quad ((X5 \in k9_subset_1 X2 X0 (k1_relset_1 X2 X3)) \Rightarrow (k7_partfun1 X1 X3 \\
 & \quad X5 = X4))))))
 \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. \forall X1. \forall X2. (m1_subset_1 X2 (k1_zfmisc_1 \\
 & \quad X0)) \Rightarrow (k9_subset_1 X0 X1 X2 = k3_xboole_0 X1 X2)
 \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((v1_membered\ X1)\wedge \\ & (((v1_funct_1\ X2)\wedge(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1 \\ & X0\ X1))))\wedge(v1_xcmplx_0\ X3)))\Rightarrow(k25_valued_1\ X0\ X1\ X2\ X3 = k24_valued_1 \\ & X2\ X3) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1_relat_1\ X1)\wedge(v4_relat_1\ X1\ X0))\Rightarrow(\\ & k1_relset_1\ X0\ X1 = k9_xtuple_0\ X1) \end{aligned} \quad (5)$$

Assume the following.

$$\neg v1_xboole_0\ k2_numbers \quad (6)$$

Assume the following.

$$v1_membered\ k2_numbers \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((v1_relat_1\ X1)\wedge((v5_relat_1 \\ & X1\ X0)\wedge(v1_funct_1\ X1)))\Rightarrow(m1_subset_1\ (k7_partfun1\ X0\ X1\ X2)\ X0) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((v1_membered\ X1)\wedge \\ & (((v1_funct_1\ X2)\wedge(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1 \\ & X0\ X1))))\wedge(v1_xcmplx_0\ X3)))\Rightarrow((v1_funct_1\ (k25_valued_1\ X0\ X1 \\ & X2\ X3))\wedge(m1_subset_1\ (k25_valued_1\ X0\ X1\ X2\ X3)\ (k1_zfmisc_1\ (k2_zfmisc_1 \\ & X0\ k2_numbers)))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(((v1_relat_1\ X0)\wedge((v1_funct_1\ X0)\wedge(v1_valued_0 \\ & X0)))\wedge(v1_xcmplx_0\ X1))\Rightarrow((v1_relat_1\ (k24_valued_1\ X0\ X1))\wedge \\ & (v1_funct_1\ (k24_valued_1\ X0\ X1))) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1_relat_1\ X1)\wedge(v4_relat_1\ X1\ X0))\Rightarrow(\\ & m1_subset_1\ (k1_relset_1\ X0\ X1)\ (k1_zfmisc_1\ X0)) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(X2 = k3_xboole_0\ X0\ X1)\Leftrightarrow(\forall X3. \\ & (X3 \in X2)\Leftrightarrow((X3 \in X0)\wedge(X3 \in X1))) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1 \\ & (k2_zfmisc_1\ X0\ X1)))\Rightarrow((v4_relat_1\ X2\ X0)\wedge(v5_relat_1\ X2\ X1)) \end{aligned} \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(v1_relat_1 X2) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.(v1_membered X1)\Rightarrow(\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(v1_valued_0 X2)) \quad (15)$$

Assume the following.

$$\forall X0.(v1_membered X0)\Rightarrow(\forall X1.(m1_subset_1 X1 X0)\Rightarrow(v1_xcmplx_0 X1)) \quad (16)$$

Theorem 1

$$\begin{aligned} & \forall X0.\forall X1.(\neg v1_xboole_0 X1)\Rightarrow(\forall X2.((v1_funct_1 \\ & X2)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X1 k2_numbers))))\Rightarrow \\ & (\forall X3.(m1_subset_1 X3 k2_numbers)\Rightarrow((v3_funct_1 (k2_partfun1 \\ & X1 k2_numbers X2 X0))\Rightarrow(v3_funct_1 (k2_partfun1 X1 k2_numbers (\\ & k25_valued_1 X1 k2_numbers X2 X3) X0)))))) \end{aligned}$$