

t4_cfunct_1

(TMSoEPn6yPu7bso9CKJptvDekCzDo2oaMWc)

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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 $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k25_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_valued_0 : \iota \Rightarrow o$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k24_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_membered : \iota \Rightarrow o$ 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. Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_valued_0 X0))) \Rightarrow \\ & (\forall X1.(v1_xcmplx_0 X1) \Rightarrow (\forall X2.k1_funct_1 (k24_valued_1 \\ & X0 X1) X2 = k3_xcmplx_0 X1 (k1_funct_1 X0 X2))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k2_numbers) \wedge (m1_subset_1 X1 k2_numbers)) \Rightarrow (k9_complex1 X0 X1 = k3_xcmplx_0 X0 X1) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((v1_membered X1) \wedge \\ & (((v1_funct_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X1)))) \wedge (v1_xcmplx_0 X3))) \Rightarrow (k25_valued_1 X0 X1 X2 X3 = k24_valued_1 \\ & X2 X3) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1) \wedge (v4_relat_1 X1 X0)) \Rightarrow (k1_relset_1 X0 X1 = k9_xtuple_0 X1) \quad (4)$$

Assume the following.

$$v1_membered k2_numbers \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1_relat_1 X1)\wedge((v5_relat_1 X1 X0)\wedge(v1_funct_1 X1)))\Rightarrow(m1_subset_1 (k7_partfun1 X0 X1 X2) X0) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((v1_membered X1)\wedge(((v1_funct_1 X2)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))\wedge(v1_xcmplx_0 X3)))\Rightarrow((v1_funct_1 (k25_valued_1 X0 X1 X2 X3))\wedge(m1_subset_1 (k25_valued_1 X0 X1 X2 X3) (k1_zfmisc_1 (k2_zfmisc_1 X0 k2_numbers)))) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_valued_0 X0)))\wedge(v1_xcmplx_0 X1))\Rightarrow((v1_relat_1 (k24_valued_1 X0 X1))\wedge(v1_funct_1 (k24_valued_1 X0 X1))) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge((v5_relat_1 X1 X0)\wedge(v1_funct_1 X1)))\Rightarrow(\forall X2.(X2 \in k9_xtuple_0 X1)\Rightarrow(k7_partfun1 X0 X1 X2 = k1_funct_1 X1 X2)) \quad (9)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_valued_0 X0)))\Rightarrow(\forall X1.(v1_xcmplx_0 X1)\Rightarrow(\forall X2.((v1_relat_1 X2)\wedge(v1_funct_1 X2))\Rightarrow((X2 = k24_valued_1 X0 X1)\Leftrightarrow((k9_xtuple_0 X2 = k9_xtuple_0 X0)\wedge(\forall X3.(X3 \in k9_xtuple_0 X2)\Rightarrow(k1_funct_1 X2 X3 = k3_xcmplx_0 X1 (k1_funct_1 X0 X3)))))) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow((v4_relat_1 X2 X0)\wedge(v5_relat_1 X2 X1)) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(v1_relat_1 X2) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.(v1_membered X1)\Rightarrow(\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(v1_valued_0 X2)) \quad (13)$$

Assume the following.

$$\forall X0.(v1_membered X0)\Rightarrow(\forall X1.(m1_subset_1 X1 X0)\Rightarrow(v1_xcmplx_0 X1)) \quad (14)$$

Theorem 1

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