

t37_cfcont_1

(TMJ7N2CiYtSQkEPpXgEHyNYn2LJ1e8oTEQn)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_numbers : \iota$ 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 $r1_cfcont_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k1_cfunct_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $r2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k19_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_cfunct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k46_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_membered : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((v1_funct_1 X1) \wedge (\\ m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 k2_numbers)))) \Rightarrow (\\ \forall X2. ((v1_funct_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ X0 k2_numbers)))) \Rightarrow (r2_relset_1 X0 k2_numbers (k1_cfunct_1 X0 \\ X1 X2) (k19_valued_1 X0 k2_numbers k2_numbers X1 (k2_cfunct_1 X0 \\ X2)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} \forall X0. (m1_subset_1 X0 k2_numbers) \Rightarrow (\forall X1. ((v1_funct_1 \\ X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k2_numbers k2_numbers)))) \Rightarrow \\ ((r1_cfcont_1 X1 X0) \Rightarrow ((k7_partfun1 k2_numbers X1 X0 = k6_numbers) \vee \\ (r1_cfcont_1 (k2_cfunct_1 k2_numbers X1) X0)))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} \forall X0. (m1_subset_1 X0 k2_numbers) \Rightarrow (\forall X1. ((v1_funct_1 \\ X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k2_numbers k2_numbers)))) \Rightarrow \\ (\forall X2. ((v1_funct_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ k2_numbers k2_numbers)))) \Rightarrow (((r1_cfcont_1 X1 X0) \wedge (r1_cfcont_1 \\ X2 X0)) \Rightarrow ((r1_cfcont_1 (k2_valued_1 k2_numbers k2_numbers k2_numbers \\ X1 X2) X0) \wedge ((r1_cfcont_1 (k46_valued_1 k2_numbers k2_numbers \\ k2_numbers X1 X2) X0) \wedge (r1_cfcont_1 (k19_valued_1 k2_numbers k2_numbers \\ k2_numbers X1 X2) X0)))))) \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\wedge(m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))\Rightarrow((r2_relset_1 X0 X1 X2 X3)\Leftrightarrow(X2 = X3)) \quad (4)$$

Assume the following.

$$\neg v1_xboole_0 k2_numbers \quad (5)$$

Assume the following.

$$v1_membered k2_numbers \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge((v1_funct_1 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 k2_numbers))))\Rightarrow((v1_funct_1 (k2_cfunct_1 X0 X1))\wedge(m1_subset_1 (k2_cfunct_1 X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 X0 k2_numbers)))) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0)\wedge(((v1_funct_1 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 k2_numbers))))\wedge((v1_funct_1 X2)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 k2_numbers))))))\Rightarrow((v1_funct_1 (k1_cfunct_1 X0 X1 X2))\wedge(m1_subset_1 (k1_cfunct_1 X0 X1 X2) (k1_zfmisc_1 (k2_zfmisc_1 X0 k2_numbers)))) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.((v1_membered X1)\wedge((v1_membered X2)\wedge(((v1_funct_1 X3)\wedge(m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))\wedge((v1_funct_1 X4)\wedge(m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 X0 X2))))))\Rightarrow((v1_funct_1 (k19_valued_1 X0 X1 X2 X3 X4))\wedge(m1_subset_1 (k19_valued_1 X0 X1 X2 X3 X4) (k1_zfmisc_1 (k2_zfmisc_1 X0 k2_numbers)))) \quad (9)$$

Theorem 1

$$\forall X0.(m1_subset_1 X0 k2_numbers)\Rightarrow(\forall X1.((v1_funct_1 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k2_numbers k2_numbers))))\Rightarrow(\forall X2.((v1_funct_1 X2)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k2_numbers k2_numbers))))\Rightarrow(((r1_cfcont_1 X1 X0)\wedge(r1_cfcont_1 X2 X0))\Rightarrow((k7_partfun1 k2_numbers X1 X0 = k6_numbers)\vee(r1_cfcont_1 (k1_cfunct_1 k2_numbers X2 X1) X0))))$$