

t19_fcont_1

(TMHP7qRQWabGxdajxtVk4QUjz2vrGxMEezS)

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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 $k1_numbers : \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_fcont_1 : \iota \Rightarrow o$ be given. Let $k2_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k47_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k20_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((r1_tarski X0 X1) \wedge \\ & (r1_tarski X2 X3)) \Rightarrow (r1_tarski (k3_xboole_0 X0 X2) (k3_xboole_0 \\ & X1 X3)) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1_funct_1 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ & (k2_zfmisc_1 k1_numbers k1_numbers)))) \Rightarrow (\forall X2. ((v1_funct_1 \\ & X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers)))) \Rightarrow \\ & (((r1_tarski X0 (k9_subset_1 k1_numbers (k1_relset_1 k1_numbers \\ & X1) (k1_relset_1 k1_numbers X2))) \wedge ((v1_fcont_1 (k2_partfun1 \\ & k1_numbers k1_numbers X1 X0)) \wedge (v1_fcont_1 (k2_partfun1 k1_numbers \\ & k1_numbers X2 X0)))) \Rightarrow ((v1_fcont_1 (k2_partfun1 k1_numbers k1_numbers \\ & (k3_valued_1 k1_numbers k1_numbers k1_numbers X1 X2) X0)) \wedge ((v1_fcont_1 \\ & (k2_partfun1 k1_numbers k1_numbers (k47_valued_1 k1_numbers \\ & k1_numbers k1_numbers X1 X2) X0)) \wedge (v1_fcont_1 (k2_partfun1 k1_numbers \\ & k1_numbers (k20_valued_1 k1_numbers k1_numbers k1_numbers X1 \\ & X2) X0)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. r1_tarski (k3_xboole_0 X0 X1) X0 \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((v1_funct_1 X2)\wedge(m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers))))\Rightarrow(((v1_fcont_1 \\ & (k2_partfun1 k1_numbers k1_numbers X2 X0))\wedge(r1_tarski X1 X0))\Rightarrow \\ & (v1_fcont_1 (k2_partfun1 k1_numbers k1_numbers X2 X1))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\ & X0))\Rightarrow(k9_subset_1 X0 X1 X2 = k3_xboole_0 X1 X2) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1_relat_1 X1)\wedge(v4_relat_1 X1 X0))\Rightarrow(\\ & m1_subset_1 (k1_relset_1 X0 X1) (k1_zfmisc_1 X0)) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.k3_xboole_0 X0 X1 = k3_xboole_0 X1 X0 \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1)))\Rightarrow((v4_relat_1 X2 X0)\wedge(v5_relat_1 X2 X1)) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1)))\Rightarrow(v1_relat_1 X2) \end{aligned} \quad (9)$$

Theorem 1

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((v1_funct_1 X2)\wedge(m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers))))\Rightarrow(\forall X3. \\ & ((v1_funct_1 X3)\wedge(m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers \\ & k1_numbers))))\Rightarrow(((r1_tarski X0 (k1_relset_1 k1_numbers X2))\wedge \\ & ((r1_tarski X1 (k1_relset_1 k1_numbers X3))\wedge((v1_fcont_1 (k2_partfun1 \\ & k1_numbers k1_numbers X2 X0))\wedge(v1_fcont_1 (k2_partfun1 k1_numbers \\ & k1_numbers X3 X1))))\Rightarrow((v1_fcont_1 (k2_partfun1 k1_numbers k1_numbers \\ & (k3_valued_1 k1_numbers k1_numbers k1_numbers X2 X3) (k3_xboole_0 \\ & X0 X1)))\wedge((v1_fcont_1 (k2_partfun1 k1_numbers k1_numbers (k47_valued_1 \\ & k1_numbers k1_numbers k1_numbers X2 X3) (k3_xboole_0 X0 X1)))\wedge \\ & (v1_fcont_1 (k2_partfun1 k1_numbers k1_numbers (k20_valued_1 \\ & k1_numbers k1_numbers k1_numbers X2 X3) (k3_xboole_0 X0 X1)))))) \end{aligned}$$