

t84_cfunct_1 (TM-
cxWMh4ZJAZdDKZ7UbcDExun179TLLDVzr)

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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 $v1_comseq_2 : \iota \Rightarrow o$ be given. Let $k2_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_funct_1 : \iota \Rightarrow o$ be given. Let $k46_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k19_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (\neg v1_xboole_0 X1) \Rightarrow (\forall X2. ((v1_funct_1 \\ & X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X1 k2_numbers)))) \Rightarrow \\ & ((v3_funct_1 (k2_partfun1 X1 k2_numbers X2 X0)) \Rightarrow (v1_comseq_2 \\ & (k2_partfun1 X1 k2_numbers X2 X0)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (\neg v1_xboole_0 X2) \Rightarrow (\forall X3. \\ & ((v1_funct_1 X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 X2 \\ & k2_numbers)))) \Rightarrow (\forall X4. ((v1_funct_1 X4) \wedge (m1_subset_1 X4 \\ & (k1_zfmisc_1 (k2_zfmisc_1 X2 k2_numbers)))) \Rightarrow (((v1_comseq_2 \\ & (k2_partfun1 X2 k2_numbers X3 X0)) \wedge (v1_comseq_2 (k2_partfun1 \\ & X2 k2_numbers X4 X1))) \Rightarrow ((v1_comseq_2 (k2_partfun1 X2 k2_numbers \\ & (k19_valued_1 X2 k2_numbers k2_numbers X3 X4) (k3_xboole_0 X0 X1))) \wedge \\ & (v1_comseq_2 (k2_partfun1 X2 k2_numbers (k46_valued_1 X2 k2_numbers \\ & k2_numbers X3 X4) (k3_xboole_0 X0 X1)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. k3_xboole_0 X0 X1 = k3_xboole_0 X1 X0 \tag{3}$$

Theorem 1

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(\neg v1_xboole_0 X2)\Rightarrow(\forall X3. \\ & ((v1_funct_1 X3)\wedge(m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 X2 \\ & k2_numbers))))\Rightarrow(\forall X4.((v1_funct_1 X4)\wedge(m1_subset_1 X4 \\ & (k1_zfmisc_1 (k2_zfmisc_1 X2 k2_numbers))))\Rightarrow(((v1_comseq_2 \\ & (k2_partfun1 X2 k2_numbers X3 X0))\wedge(v3_funct_1 (k2_partfun1 X2 \\ & k2_numbers X4 X1)))\Rightarrow((v1_comseq_2 (k2_partfun1 X2 k2_numbers \\ & (k46_valued_1 X2 k2_numbers k2_numbers X3 X4) (k3_xboole_0 X0 X1)))\wedge \\ & ((v1_comseq_2 (k2_partfun1 X2 k2_numbers (k46_valued_1 X2 k2_numbers \\ & k2_numbers X4 X3) (k3_xboole_0 X0 X1)))\wedge(v1_comseq_2 (k2_partfun1 \\ & X2 k2_numbers (k19_valued_1 X2 k2_numbers k2_numbers X3 X4) (k3_xboole_0 \\ & X0 X1))))))))) \end{aligned}$$