

t21_supinf_2 (TMYELVc-
NNw8EMW7kxx4DN93LQ3TzJ3F6fHp)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k7_numbers : \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_supinf_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_supinf_1 : \iota$ be given. Let $k10_supinf_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11_supinf_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_supinf_1 : \iota$ be given. Let $v2_supinf_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_supinf_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1_subset_1 X1 (k1_zfmisc_1 k7_numbers)) \Rightarrow \\ & (\forall X2. ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 X1) \wedge (m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \Rightarrow ((v2_supinf_2 X2 X0 X1) \Leftrightarrow \\ & (\neg r1_xxreal_0 (k11_supinf_2 k7_numbers X0 X1 X2) k2_supinf_1))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1_subset_1 X1 (k1_zfmisc_1 k7_numbers)) \Rightarrow \\ & (\forall X2. ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 X1) \wedge (m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \Rightarrow ((v1_supinf_2 X2 X0 X1) \Leftrightarrow \\ & (\neg r1_xxreal_0 k1_supinf_1 (k10_supinf_2 k7_numbers X0 X1 X2)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1_subset_1 X1 (k1_zfmisc_1 k7_numbers)) \Rightarrow \\ & (\forall X2. (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow \\ & (((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 X1) \wedge ((v1_supinf_2 X2 X0 X1) \wedge \\ & (v2_supinf_2 X2 X0 X1)))))) \Rightarrow ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 \\ & X1) \wedge (v3_supinf_2 X2 X0 X1)))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 k7_numbers))\Rightarrow \\
& (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow \\
& (((v1_funct_1 X2)\wedge((v1_funct_2 X2 X0 X1)\wedge(v3_supinf_2 X2 X0 X1)))\Rightarrow \\
& ((v1_funct_1 X2)\wedge((v1_funct_2 X2 X0 X1)\wedge((v1_supinf_2 X2 X0 X1)\wedge \\
& (v2_supinf_2 X2 X0 X1))))))
\end{aligned} \tag{4}$$

Theorem 1

$$\begin{aligned}
& \forall X0.(\neg v1_xboole_0 X0)\Rightarrow(\forall X1.((\neg v1_xboole_0 X1)\wedge \\
& (m1_subset_1 X1 (k1_zfmisc_1 k7_numbers)))\Rightarrow(\forall X2.((v1_funct_1 \\
& X2)\wedge((v1_funct_2 X2 X0 X1)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\
& X0 X1))))\Rightarrow((v3_supinf_2 X2 X0 X1)\Leftrightarrow((\neg r1_xxreal_0 k1_supinf_1 \\
& (k10_supinf_2 k7_numbers X0 X1 X2))\wedge(\neg r1_xxreal_0 (k11_supinf_2 \\
& k7_numbers X0 X1 X2) k2_supinf_1))))))
\end{aligned}$$