

t30_supinf_2

(TMKDsM7qoDc6vNQWvXkBu2gp4Ky6uCHTEff)

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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 $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $v3_supinf_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k11_supinf_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_supinf_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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.

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((\neg v1_xboole_0 X1) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 k7_numbers))) \Rightarrow (\forall X2.((v1_funct_1 \\ & X2) \wedge ((v1_funct_2 X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X1)))))) \Rightarrow ((r1_tarski X1 k1_numbers) \Rightarrow ((v2_supinf_2 X2 X0 X1) \Leftrightarrow \\ & (k11_supinf_2 k7_numbers X0 X1 X2 \in k1_numbers)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((\neg v1_xboole_0 X1) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 k7_numbers))) \Rightarrow (\forall X2.((v1_funct_1 \\ & X2) \wedge ((v1_funct_2 X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X1)))))) \Rightarrow ((r1_tarski X1 k1_numbers) \Rightarrow ((v1_supinf_2 X2 X0 X1) \Leftrightarrow \\ & (k10_supinf_2 k7_numbers X0 X1 X2 \in k1_numbers)))))) \end{aligned} \tag{2}$$

Assume the following.

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

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

$$\begin{aligned}
& \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((\neg v1_xboole_0 X1) \wedge \\
& (m1_subset_1 X1 (k1_zfmisc_1 k7_numbers))) \Rightarrow (\forall X2. ((v1_funct_1 \\
& X2) \wedge ((v1_funct_2 X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\
& X0 X1)))))) \Rightarrow ((r1_tarski X1 k1_numbers) \Rightarrow ((v3_supinf_2 X2 X0 X1) \Leftrightarrow \\
& ((k11_supinf_2 k7_numbers X0 X1 X2 \in k1_numbers) \wedge (k10_supinf_2 \\
& k7_numbers X0 X1 X2 \in k1_numbers))))))
\end{aligned}$$