

t25_fuzzy_4
(TMLPzNjUYutfWtqyCTz1ofgj35iy45gdNAV)

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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 $k1_fuzzy_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_fuzzy_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_rcomp_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k1_numbers : \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(k4_tarski\ X0\ X1 \in k2_zfmisc_1\ X2\ X3) \Leftrightarrow ((X0 \in X2) \wedge (X1 \in X3)) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1\ X0\ X1) \Rightarrow ((v1_xboole_0\ X1) \vee (X0 \in X1)) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((\neg v1_xboole_0\ X0) \wedge (\neg v1_xboole_0\ X1)) \Rightarrow \\ & ((v5_relat_1\ (k5_fuzzy_4\ X0\ X1)\ (k1_rcomp_1\ k6_numbers\ np_1)) \wedge \\ & ((v1_funct_1\ (k5_fuzzy_4\ X0\ X1)) \wedge ((v1_funct_2\ (k5_fuzzy_4\ X0 \\ & X1)\ (k2_zfmisc_1\ X0\ X1)\ k1_numbers) \wedge (m1_subset_1\ (k5_fuzzy_4 \\ & X0\ X1)\ (k1_zfmisc_1\ (k2_zfmisc_1\ (k2_zfmisc_1\ X0\ X1)\ k1_numbers)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.k4_tarski\ X0\ X1 = k2_tarski\ (k2_tarski\ X0\ X1)\ (k1_tarski\ X0) \quad (4)$$

Assume the following.

$$\begin{aligned}
& \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(\neg v1_xboole_0 X1) \Rightarrow \\
& (\forall X2.((v5_relat_1 X2 (k1_rcomp_1 k6_numbers np_1)) \wedge (\\
& (v1_funct_1 X2) \wedge ((v1_funct_2 X2 (k2_zfmisc_1 X0 X1) k1_numbers) \wedge \\
& (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 X0 X1) \\
& k1_numbers)))))) \Rightarrow ((X2 = k5_fuzzy_4 X0 X1) \Leftrightarrow (\forall X3.\forall X4. \\
& (k4_tarski X3 X4 \in k2_zfmisc_1 X0 X1) \Rightarrow (((X3 = X4) \Rightarrow (k1_fuzzy_4 X0 \\
& X1 X2 X3 X4 = np_1)) \wedge ((X3 \neq X4) \Rightarrow (k1_fuzzy_4 X0 X1 X2 X3 X4 = k6_numbers))))))))) \\
& \hspace{15em} (5)
\end{aligned}$$

Theorem 1

$$\begin{aligned}
& \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(\neg v1_xboole_0 X1) \Rightarrow \\
& (\forall X2.(m1_subset_1 X2 X0) \Rightarrow (\forall X3.(m1_subset_1 X3 X1) \Rightarrow \\
& (((X2 = X3) \Rightarrow (k1_fuzzy_4 X0 X1 (k5_fuzzy_4 X0 X1) X2 X3 = np_1)) \wedge (\\
& (X2 \neq X3) \Rightarrow (k1_fuzzy_4 X0 X1 (k5_fuzzy_4 X0 X1) X2 X3 = k6_numbers))))))
\end{aligned}$$