

t55_fuzzy_2

(TMU5SuZFheu2ozi58JDiSrUooBgUnWtNSCH)

October 27, 2020

Let $v1_xboole_0 : \iota \Rightarrow o$ 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 $k6_numbers : \iota$ be given. Let $np_1 : \iota$ 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 $k1_numbers : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $r2_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_fuzzy_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_fuzzy_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_fuzzy_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_fuzzy_1 : \iota \Rightarrow \iota$ be given. Let $k7_rfunct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_funct_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_funct_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((v5_relat_1 X1 (k1_rcomp_1 \\ k6_numbers np_1)) \wedge ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 X0 k1_numbers) \wedge \\ (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 k1_numbers)))))) \Rightarrow \\ (\forall X2. ((v5_relat_1 X2 (k1_rcomp_1 k6_numbers np_1)) \wedge (\\ (v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 k1_numbers) \wedge (m1_subset_1 \\ X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 k1_numbers)))))) \Rightarrow ((r2_funct_2 \\ X0 k1_numbers (k1_fuzzy_2 X0 X1 X2) (k4_fuzzy_1 X0)) \Rightarrow (r1_fuzzy_1 \\ X1 X2)))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. k7_rfunct_1 X0 X1 = k4_funct_3 X0 X1 \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. k5_funct_3 X0 X1 = k4_funct_3 X0 X1 \tag{3}$$

Assume the following.

$$\forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge (\neg v1_xboole_0 X1)) \Rightarrow \\ (\neg v1_xboole_0 (k2_zfmisc_1 X0 X1)) \tag{4}$$

Assume the following.

$$\forall X0. (\neg v1_xboole_0 X0) \Rightarrow (k4_fuzzy_1 X0 = k7_rfunct_1 k1_xboole_0 X0) \tag{5}$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(\neg v1_xboole_0 X1) \Rightarrow \\ & (k4_fuzzy_2 X0 X1 = k5_funct_3 k1_xboole_0 (k2_zfmisc_1 X0 X1))) \end{aligned} \quad (6)$$

Theorem 1

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(\neg v1_xboole_0 X1) \Rightarrow \\ & (\forall X2.((v5_relat_1 X2 (k1_rcomp_1 k6_numbers np_1)) \wedge \\ & (v1_funct_1 X2) \wedge ((v1_funct_2 X2 (k2_zfmisc_1 X0 X1) k1_numbers) \wedge \\ & (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 X0 X1) \\ & k1_numbers)))))) \Rightarrow (\forall X3.((v5_relat_1 X3 (k1_rcomp_1 k6_numbers \\ & np_1)) \wedge ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 (k2_zfmisc_1 X0 X1) \\ & k1_numbers) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 \\ & X0 X1) k1_numbers)))))) \Rightarrow ((r2_funct_2 (k2_zfmisc_1 X0 X1) k1_numbers \\ & (k1_fuzzy_2 (k2_zfmisc_1 X0 X1) X2 X3) (k4_fuzzy_2 X0 X1)) \Rightarrow (r1_fuzzy_1 \\ & X2 X3)))))) \end{aligned}$$