

t19_lfuzzy_0 (TMQi-
AWvZfL6baNFppQne6TU7QDLdd8gLgTm)

October 27, 2020

Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k4_lfuzzy_0 : \iota \Rightarrow \iota$ be given. Let $k13_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_fuzzy_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_lfuzzy_0 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k6_numbers : \iota$ 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 $k1_numbers : \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_lfuzzy_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((v5_relat_1 X1 (k1_rcomp_1 \\ & k6_numbers np_1)) \wedge ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 X0 k1_numbers) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 k1_numbers)))))) \Rightarrow \\ & (\forall X2. ((v5_relat_1 X2 (k1_rcomp_1 k6_numbers np_1)) \wedge (\\ & (v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 k1_numbers) \wedge (m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 k1_numbers)))))) \Rightarrow (k2_fuzzy_1 \\ & X0 X1 X2 = k13_lattice3 (k4_lfuzzy_0 X0) (k6_lfuzzy_0 X0 X1) (k6_lfuzzy_0 \\ & X0 X2)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge (m1_subset_1 X1 (u1_struct_0 \\ & (k4_lfuzzy_0 X0)))) \Rightarrow ((v5_relat_1 (k5_lfuzzy_0 X0 X1) (k1_rcomp_1 \\ & k6_numbers np_1)) \wedge ((v1_funct_1 (k5_lfuzzy_0 X0 X1)) \wedge ((v1_funct_2 \\ & (k5_lfuzzy_0 X0 X1) X0 k1_numbers) \wedge (m1_subset_1 (k5_lfuzzy_0 \\ & X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 X0 k1_numbers)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((v5_relat_1 X1 (k1_rcomp_1 \\ & k6_numbers np_1)) \wedge ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 X0 k1_numbers) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 k1_numbers)))))) \Rightarrow \\ & (k6_lfuzzy_0 X0 X1 = X1)) \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k4_lfuzzy_0 X0))) \Rightarrow (k5_lfuzzy_0 X0 X1 = X1)) \quad (4)$$

Theorem 1

$$\forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k4_lfuzzy_0 X0))) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 (k4_lfuzzy_0 X0))) \Rightarrow (k13_lattice3 (k4_lfuzzy_0 X0) X1 X2 = k2_fuzzy_1 X0 (k5_lfuzzy_0 X0 X1) (k5_lfuzzy_0 X0 X2))))$$