

t52_fuzzy_2
(TMNKCffgKrU8Ht8nWeb8zb97Dfp7FsjobL9)

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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 $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k6_numbers : \iota$ 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 $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_seq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_fuzzy_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_fuzzy_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_fuzzy_1 : \iota \Rightarrow \iota$ be given. Let $k5_fuzzy_1 : \iota \Rightarrow \iota$ 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.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. (m1_subset_1 X1 X0) \Rightarrow \\ & (\forall X2. ((v5_relat_1 X2 (k1_rcomp_1 k6_numbers np_1)) \wedge \\ & (v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 k1_numbers) \wedge (m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 k1_numbers)))))) \Rightarrow ((r1_xxreal_0 \\ & (k1_seq_1 (k4_fuzzy_1 X0) X1) (k1_seq_1 X2 X1)) \wedge (r1_xxreal_0 (\\ & k1_seq_1 X2 X1) (k1_seq_1 (k5_fuzzy_1 X0) X1)))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. k7_rfunct_1 X0 X1 = k4_funct_3 X0 X1 \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. k5_funct_3 X0 X1 = k4_funct_3 X0 X1 \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge (\neg v1_xboole_0 X1)) \Rightarrow (\neg v1_xboole_0 (k2_zfmisc_1 X0 X1)) \quad (4)$$

Assume the following.

$$\forall X0. (\neg v1_xboole_0 X0) \Rightarrow (k5_fuzzy_1 X0 = k7_rfunct_1 X0 X0) \quad (5)$$

Assume the following.

$$\forall X0.(\neg v1_xboole_0 X0) \Rightarrow (k4_fuzzy_1 X0 = k7_rfunc_1 k1_xboole_0 X0) \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(\neg v1_xboole_0 X1) \Rightarrow \\ (k5_fuzzy_2 X0 X1 = k5_func_3 (k2_zfmisc_1 X0 X1) (k2_zfmisc_1 \\ X0 X1))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(\neg v1_xboole_0 X1) \Rightarrow \\ (k4_fuzzy_2 X0 X1 = k5_func_3 k1_xboole_0 (k2_zfmisc_1 X0 X1))) \end{aligned} \quad (8)$$

Theorem 1

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(\neg v1_xboole_0 X1) \Rightarrow \\ (\forall X2.(m1_subset_1 X2 (k2_zfmisc_1 X0 X1)) \Rightarrow (\forall X3. \\ ((v5_relat_1 X3 (k1_rcomp_1 k6_numbers np_1)) \wedge ((v1_func_1 \\ X3) \wedge ((v1_func_2 X3 (k2_zfmisc_1 X0 X1) k1_numbers) \wedge (m1_subset_1 \\ X3 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 X0 X1) k1_numbers)))))) \Rightarrow \\ ((r1_xreal_0 (k1_seq_1 (k4_fuzzy_2 X0 X1) X2) (k1_seq_1 X3 X2)) \wedge \\ (r1_xreal_0 (k1_seq_1 X3 X2) (k1_seq_1 (k5_fuzzy_2 X0 X1) X2)))))) \end{aligned}$$