

# l19\_lfuzzy\_0

## (TMLCuDKe4q2c3p5kVucPqwAuzohxqi5ec3v)

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Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v1\_monoid\_0 : \iota \Rightarrow o$  be given. Let  $k4\_lfuzzy\_0 : \iota \Rightarrow \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k9\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  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  $v2\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $k1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $k1\_xxreal\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v6\_membered : \iota \Rightarrow o$  be given. Let  $m1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $l1\_orders\_2 : \iota \Rightarrow o$  be given. Let  $l1\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v3\_orders\_2 : \iota \Rightarrow o$  be given. Let  $v4\_orders\_2 : \iota \Rightarrow o$  be given. Let  $v5\_orders\_2 : \iota \Rightarrow o$  be given. Let  $v1\_lattice3 : \iota \Rightarrow o$  be given. Let  $v2\_lattice3 : \iota \Rightarrow o$  be given. Let  $v3\_lattice3 : \iota \Rightarrow o$  be given. Let  $v9\_waybel\_1 : \iota \Rightarrow o$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k10\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $v4\_membered : \iota \Rightarrow o$  be given. Let  $v3\_membered : \iota \Rightarrow o$  be given. Let  $v5\_membered : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. \forall X1. (m1\_subset\_1 X0 X1) \Rightarrow ((v1\_xboole\_0 X1) \vee (X0 \in X1)) \quad (1)$$

Assume the following.

$$m1\_subset\_1 k1\_xboole\_0 k4\_ordinal1 \quad (2)$$

Assume the following.

$$\forall X0. (\neg v1\_xboole\_0 X0) \Rightarrow (u1\_struct\_0 (k4\_lfuzzy\_0 X0) = k9\_funct\_2 X0 (k1\_rcomp\_1 k6\_numbers np\_1)) \quad (3)$$

Assume the following.

$$((v2\_xxreal\_0 np\_1) \wedge (m2\_subset\_1 np\_1 k1\_numbers k5\_numbers)) \wedge ((m1\_subset\_1 np\_1 k5\_numbers) \wedge (m1\_subset\_1 np\_1 k1\_numbers)) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(\neg v1\_xboole\_0 X1)\Rightarrow(k9\_funct\_2 X0 X1 = k1\_funct\_2 X0 X1) \quad (5)$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xreal\_0 X0)\wedge(v1\_xreal\_0 X1))\Rightarrow(k1\_rcomp\_1 X0 X1 = k1\_xxreal\_1 X0 X1) \quad (7)$$

Assume the following.

$$v6\_membered k4\_ordinal1 \quad (8)$$

Assume the following.

$$\neg v1\_xboole\_0 (k1\_xxreal\_1 k6\_numbers np\_1) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_funct\_2 X2 X0 X1)\Rightarrow(\neg v1\_xboole\_0 X2) \quad (10)$$

Assume the following.

$$\forall X0.(l1\_orders\_2 X0)\Rightarrow(l1\_struct\_0 X0) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.(\neg v1\_xboole\_0 X1)\Rightarrow(m1\_funct\_2 (k9\_funct\_2 X0 X1) X0 X1) \quad (12)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1\_xboole\_0 X0)\Rightarrow & ((v3\_orders\_2 (k4\_lfuzzy\_0 X0))\wedge \\ & ((v4\_orders\_2 (k4\_lfuzzy\_0 X0))\wedge(v5\_orders\_2 (k4\_lfuzzy\_0 \\ & X0))\wedge((v1\_lattice3 (k4\_lfuzzy\_0 X0))\wedge((v2\_lattice3 (k4\_lfuzzy\_0 \\ & X0))\wedge((v3\_lattice3 (k4\_lfuzzy\_0 X0))\wedge((v9\_waybel\_1 (k4\_lfuzzy\_0 \\ & X0))\wedge(l1\_orders\_2 (k4\_lfuzzy\_0 X0)))))))))) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.(X2 = k1\_funct\_2 X0 X1)\Leftrightarrow & (\forall X3. \\ (X3 \in X2)\Leftrightarrow(\exists X4. & ((v1\_relat\_1 X4)\wedge(v1\_funct\_1 X4))\wedge((X3 = \\ X4)\wedge((k9\_xtuple\_0 X4 = X0)\wedge(r1\_tarSKI (k10\_xtuple\_0 X4) X1)))))) \end{aligned} \quad (14)$$

Assume the following.

$$\forall X0.(l1\_struct\_0 X0) \Rightarrow ((v1\_monoid\_0 X0) \Leftrightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow ((v1\_relat\_1 X1) \wedge (v1\_funct\_1 X1)))) \quad (15)$$

Assume the following.

$$\forall X0.(v4\_membered X0) \Rightarrow (v3\_membered X0) \quad (16)$$

Assume the following.

$$\forall X0.(v5\_membered X0) \Rightarrow (v4\_membered X0) \quad (17)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k1\_numbers) \Rightarrow (v1\_xreal\_0 X0) \quad (18)$$

Assume the following.

$$\forall X0.(v6\_membered X0) \Rightarrow (v5\_membered X0) \quad (19)$$

Assume the following.

$$\forall X0.(v3\_membered X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 X0) \Rightarrow (v1\_xreal\_0 X1)) \quad (20)$$

**Theorem 1**  $\forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow (v1\_monoid\_0 (k4\_lfuzzy\_0 X0)).$