

t6_lfuzzy_0
(TMMi6SLxnBeikZcR29YSzSRD31TdGrswkw)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v1_lfuzzy_0 : \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $r1_xreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_yellow_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $r1_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v1_lfuzzy_0 X0) \wedge (l1_orders_2 \\ & \quad X0))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow ((r1_xreal_0 X1 X2) \Leftrightarrow (r1_orders_2 \\ & \quad X0 X1 X2)))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \tag{3}$$

Assume the following.

$$\forall X0. ((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\neg v1_xboole_0 (u1_struct_0 X0)) \tag{4}$$

Assume the following.

$$\forall X0. (l1_orders_2 X0) \Rightarrow (l1_struct_0 X0) \tag{5}$$

Assume the following.

$$\begin{aligned} & \forall X0. (l1_orders_2 X0) \Rightarrow (\forall X1. \forall X2. (m1_subset_1 \\ & X2 (u1_struct_0 X0)) \Rightarrow ((r1_lattice3 X0 X1 X2) \Leftrightarrow (\forall X3. (m1_subset_1 \\ & X3 (u1_struct_0 X0)) \Rightarrow ((X3 \in X1) \Rightarrow (r1_orders_2 X0 X2 X3)))))) \end{aligned} \tag{6}$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow ((v1_yellow_0 X0) \Leftrightarrow (\exists X1.(m1_subset_1 X1 (u1_struct_0 X0) \wedge (r1_lattice3 X0 (u1_struct_0 X0) X1)))) \quad (7)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((v1_lfuzzy_0 X0) \wedge (l1_orders_2 X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (v1_xreal_0 X1)) \quad (8)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v1_lfuzzy_0 X0) \wedge (l1_orders_2 \\ & X0))) \Rightarrow ((\exists X1.(v1_xreal_0 X1) \wedge ((X1 \in u1_struct_0 X0) \wedge (\forall X2. \\ & (v1_xreal_0 X2) \Rightarrow ((X2 \in u1_struct_0 X0) \Rightarrow (r1_xxreal_0 X1 X2)))))) \Leftrightarrow \\ & (v1_yellow_0 X0) \end{aligned}$$