

t17_openlatt
(TMJP6pcihttUFa6ASmwLNGWG5DR1p3CWTXM)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v10_lattices : \iota \Rightarrow o$ be given. Let $v11_lattices : \iota \Rightarrow o$ be given. Let $l3_lattices : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k7_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k10_openlatt : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v19_lattices : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v20_lattices : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0. (&(\neg v2_struct_0 X0) \wedge ((v10_lattices X0) \wedge ((v11_lattices \\ &X0) \wedge (l3_lattices X0)))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 \\ &X0)) \Rightarrow (\forall X2. (X2 \in k10_openlatt X0 X1) \Leftrightarrow (((\neg v1_xboole_0 X2) \wedge \\ &((v19_lattices X2 X0) \wedge ((v20_lattices X2 X0) \wedge (m1_subset_1 X2 (\\ &k1_zfmisc_1 (u1_struct_0 X0)))))) \wedge (X1 \in X2)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (k7_subset_1 X0 X1 X2 = k4_xboole_0 X1 X2) \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (&((\neg v2_struct_0 X0) \wedge ((v10_lattices X0) \wedge \\ &((v11_lattices X0) \wedge (l3_lattices X0)))) \wedge (m1_subset_1 X1 (u1_struct_0 \\ &X0))) \Rightarrow (m1_subset_1 (k10_openlatt X0 X1) (k1_zfmisc_1 (k1_zfmisc_1 \\ &(u1_struct_0 X0)))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. (X2 = k4_xboole_0 X0 X1) \Leftrightarrow (\forall X3. \\ (X3 \in X2) \Leftrightarrow ((X3 \in X0) \wedge (\neg X3 \in X1))) \end{aligned} \quad (4)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (v10_lattices X0) \wedge ((v11_lattices \\ & X0) \wedge (l3_lattices X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. \\ & (X3 \in k7_subset_1 (k1_zfmisc_1 (u1_struct_0 X0)) (k10_openlatt \\ & X0 X1) (k10_openlatt X0 X2)) \Rightarrow (((\neg v1_xboole_0 X3) \wedge ((v19_lattices \\ & X3 X0) \wedge (v20_lattices X3 X0) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (u1_struct_0 \\ & X0)))))) \wedge ((X1 \in X3) \wedge (\neg X2 \in X3)))))) \end{aligned}$$