

t26_filter_2

(TMZ9jgBNE7gUdPwA7pqhzwvAnJFK3KRCEgU)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v10_lattices : \iota \Rightarrow o$ 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 $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k6_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v18_lattices : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v21_lattices : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $v13_lattices : \iota \Rightarrow o$ be given. Let $v14_lattices : \iota \Rightarrow o$ be given. Let $k1_lattice2 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $v19_lattices : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v20_lattices : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_lattices : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((v10_lattices X0) \wedge (l3_lattices X0))) \Rightarrow ((v13_lattices X0) \Leftrightarrow (v14_lattices (k1_lattice2 X0))) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 (k1_zfmisc_1 X1)) \Leftrightarrow (r1_tarski X0 X1) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (r1_tarski (k1_tarski X0) X1) \Leftrightarrow (X0 \in X1) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v10_lattices X0) \wedge (l3_lattices X0))) \Rightarrow (\forall X1. ((\neg v1_xboole_0 X1) \wedge ((v18_lattices X1 X0) \wedge \\ & ((v21_lattices X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0)))))) \Leftrightarrow ((\neg v1_xboole_0 X1) \wedge ((v19_lattices X1 (k1_lattice2 X0)) \wedge ((v20_lattices X1 (k1_lattice2 X0)) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 (k1_lattice2 X0)))))))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v10_lattices X0) \wedge (l3_lattices \\ X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (((\neg v1_xboole_0 \\ (k6_domain_1 (u1_struct_0 X0) X1)) \wedge ((v19_lattices (k6_domain_1 \\ (u1_struct_0 X0) X1) X0) \wedge ((v20_lattices (k6_domain_1 (u1_struct_0 \\ X0) X1) X0) \wedge (m1_subset_1 (k6_domain_1 (u1_struct_0 X0) X1) (k1_zfmisc_1 \\ (u1_struct_0 X0)))))) \Rightarrow (v14_lattices X0))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge (m1_subset_1 X1 X0)) \Rightarrow (k6_domain_1 X0 X1 = k1_tarski X1) \quad (6)$$

Assume the following.

$$\forall X0. ((\neg v2_struct_0 X0) \wedge ((v10_lattices X0) \wedge (l3_lattices \\ X0))) \Rightarrow ((v3_lattices (k1_lattice2 X0)) \wedge (v10_lattices (k1_lattice2 \\ X0))) \quad (7)$$

Assume the following.

$$\forall X0. \neg v1_xboole_0 (k1_tarski X0) \quad (8)$$

Assume the following.

$$\forall X0. ((\neg v2_struct_0 X0) \wedge (l3_lattices X0)) \Rightarrow ((\neg v2_struct_0 \\ (k1_lattice2 X0)) \wedge (v3_lattices (k1_lattice2 X0))) \quad (9)$$

Assume the following.

$$\forall X0. (l3_lattices X0) \Rightarrow ((v3_lattices (k1_lattice2 X0)) \wedge \\ (l3_lattices (k1_lattice2 X0))) \quad (10)$$

Assume the following.

$$\forall X0. \forall X1. ((\neg v1_xboole_0 X0) \Rightarrow ((m1_subset_1 X1 X0) \Leftrightarrow \\ (X1 \in X0))) \wedge ((v1_xboole_0 X0) \Rightarrow ((m1_subset_1 X1 X0) \Leftrightarrow (v1_xboole_0 \\ X1))) \quad (11)$$

Assume the following.

$$\forall X0. (v1_xboole_0 X0) \Rightarrow (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 \\ X0)) \Rightarrow (v1_xboole_0 X1)) \quad (12)$$

Theorem 1

$$\begin{aligned} \forall X0. ((\neg v2_struct_0 X0) \wedge ((v10_lattices X0) \wedge (l3_lattices \\ X0))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (((\neg v1_xboole_0 \\ (k6_domain_1 (u1_struct_0 X0) X1)) \wedge ((v18_lattices (k6_domain_1 \\ (u1_struct_0 X0) X1) X0) \wedge ((v21_lattices (k6_domain_1 (u1_struct_0 \\ X0) X1) X0) \wedge (m1_subset_1 (k6_domain_1 (u1_struct_0 X0) X1) (k1_zfmisc_1 \\ (u1_struct_0 X0)))))) \Rightarrow (v13_lattices X0))) \end{aligned}$$