

t24.msualg_7 (TMaCk-
mJMy8UL8LAWMY1b9gfzLKRK937crZg)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v10_lattices : \iota \Rightarrow o$ be given. Let $v4_lattice3 : \iota \Rightarrow o$ be given. Let $l3_lattices : \iota \Rightarrow o$ be given. Let $m2_nat_lat : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_msualg_7 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_msualg_7 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_msualg_7 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $np_1 : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ 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 $k5_numbers : \iota$ be given. Let $np_0 : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $v3_lattices : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \exists X0.(m2_nat_lat\ X0\ (k1_msualg_7\ k6_numbers\ np_1)) \wedge ((\\ v1_msualg_7\ X0\ (k1_msualg_7\ k6_numbers\ np_1)) \wedge (\neg v2_msualg_7 \\ X0\ (k1_msualg_7\ k6_numbers\ np_1))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_subset_1\ X0\ k1_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\ X1\ k1_numbers) \Rightarrow ((r1_xxreal_0\ X0\ X1) \Rightarrow (v4_lattice3\ (k1_msualg_7 \\ X0\ X1)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} ((v2_xxreal_0\ np_1) \wedge (m2_subset_1\ np_1\ k1_numbers\ k5_numbers)) \wedge \\ ((m1_subset_1\ np_1\ k5_numbers) \wedge (m1_subset_1\ np_1\ k1_numbers)) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} (m2_subset_1\ np_0\ k1_numbers\ k5_numbers) \wedge ((m1_subset_1\ np_0 \\ k5_numbers) \wedge (m1_subset_1\ np_0\ k1_numbers)) \end{aligned} \quad (4)$$

Assume the following.

$$v1_xboole_0\ np_0 \quad (5)$$

Assume the following.

$$r1_xxreal_0\ np_0\ np_1 \quad (6)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (7)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((m1_subset_1 X0 k1_numbers) \wedge (m1_subset_1 \\ X1 k1_numbers)) \Rightarrow ((\neg v2_struct_0 (k1_msualg_7 X0 X1)) \wedge (v3_lattices \\ (k1_msualg_7 X0 X1)) \wedge ((v10_lattices (k1_msualg_7 X0 X1)) \wedge (l3_lattices \\ (k1_msualg_7 X0 X1)))))) \end{aligned} \quad (9)$$

Theorem 1

$$\begin{aligned} \exists X0.((\neg v2_struct_0 X0) \wedge ((v10_lattices X0) \wedge ((v4_lattice3 \\ X0) \wedge (l3_lattices X0)))) \wedge (\exists X1.(m2_nat_lat X1 X0) \wedge ((v1_msualg_7 \\ X1 X0) \wedge (\neg v2_msualg_7 X1 X0))) \end{aligned}$$