

t22\_msualg\_7  
(TMWNdno9kwzjkjCtGopyvBhhb3ZEcFrhEfUX)

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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  $v2\_msualg\_7 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_msualg\_7 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k1\_xboole\_0 : \iota$  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  $v3\_lattices : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.(v1\_xboole\_0 X0) \Rightarrow (X0 = k1\_xboole\_0) \quad (1)$$

Assume the following.

$$\begin{aligned} \exists X0.(m2\_nat\_lat X0 (k1\_msualg\_7 k6\_numbers np\_1)) \wedge (( \\ v2\_msualg\_7 X0 (k1\_msualg\_7 k6\_numbers np\_1)) \wedge (\neg v1\_msualg\_7 \\ X0 (k1\_msualg\_7 k6\_numbers np\_1))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1\_subset\_1 X0 k1\_numbers) \Rightarrow (\forall X1.(m1\_subset\_1 \\ X1 k1\_numbers) \Rightarrow ((r1\_xxreal\_0 X0 X1) \Rightarrow (v4\_lattice3 (k1\_msualg\_7 \\ X0 X1)))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} ((v2\_xxreal\_0 np\_1) \wedge (m2\_subset\_1 np\_1 k1\_numbers k5\_numbers)) \wedge \\ ((m1\_subset\_1 np\_1 k5\_numbers) \wedge (m1\_subset\_1 np\_1 k1\_numbers)) \end{aligned} \quad (4)$$

Assume the following.

$$(m2\_subset\_1 np\_0 k1\_numbers k5\_numbers) \wedge ((m1\_subset\_1 np\_0 \\ k5\_numbers) \wedge (m1\_subset\_1 np\_0 k1\_numbers)) \quad (5)$$

Assume the following.

$$v1\_xboole\_0 np\_0 \quad (6)$$

Assume the following.

$$r1\_xreal\_0 \text{ } np\_0 \text{ } np\_1 \quad (7)$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((m1\_subset\_1 \text{ } X0 \text{ } k1\_numbers) \wedge (m1\_subset\_1 \\ & X1 \text{ } k1\_numbers)) \Rightarrow ((\neg v2\_struct\_0 \text{ } (k1\_msualg\_7 \text{ } X0 \text{ } X1)) \wedge ((v3\_lattices \\ & (k1\_msualg\_7 \text{ } X0 \text{ } X1)) \wedge ((v10\_lattices \text{ } (k1\_msualg\_7 \text{ } X0 \text{ } X1)) \wedge (l3\_lattices \\ & (k1\_msualg\_7 \text{ } X0 \text{ } X1)))))) \end{aligned} \quad (9)$$

**Theorem 1**

$$\begin{aligned} & \exists X0. ((\neg v2\_struct\_0 \text{ } X0) \wedge ((v10\_lattices \text{ } X0) \wedge ((v4\_lattice3 \\ & X0) \wedge (l3\_lattices \text{ } X0)))) \wedge (\exists X1. (m2\_nat\_lat \text{ } X1 \text{ } X0) \wedge ((v2\_msualg\_7 \\ & X1 \text{ } X0) \wedge (\neg v1\_msualg\_7 \text{ } X1 \text{ } X0))) \end{aligned}$$