

t27_robins4
(TMJiFRmpBg7qAvLSgQ2paDtYkzXkVzjdjz9)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k2_robins4 : \iota$ be given. Let $np_3 : \iota$ be given. Let $k3_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $r3_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k8_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k6_numbers : \iota$ be given. Let $np_1 : \iota$ be given. Let $np_2 : \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k1_enumset1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k1_numbers : \iota$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v6_lattices : \iota \Rightarrow o$ be given. Let $v8_lattices : \iota \Rightarrow o$ be given. Let $v9_lattices : \iota \Rightarrow o$ be given. Let $l3_lattices : \iota \Rightarrow o$ be given. Let $r1_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_lattices : \iota \Rightarrow o$ be given. Let $l2_lattices : \iota \Rightarrow o$ be given. Let $k1_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v10_lattices : \iota \Rightarrow o$ be given. Let $v4_robins1 : \iota \Rightarrow o$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $l4_robins1 : \iota \Rightarrow o$ be given. Let $l2_robins1 : \iota \Rightarrow o$ be given. Let $l1_robins1 : \iota \Rightarrow o$ be given. Let $v5_lattices : \iota \Rightarrow o$ be given. Let $v7_lattices : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. (m1_subset_1 X0 (u1_struct_0 k2_robins4)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (u1_struct_0 k2_robins4)) \Rightarrow ((r3_lattices k2_robins4 \\ & X0 X1) \Leftrightarrow (r1_tarski X0 X1))) \end{aligned} \quad (2)$$

Assume the following.

$$np_3 = k8_domain_1 k5_numbers k6_numbers np_1 np_2 \quad (3)$$

Assume the following.

$$m1_subset_1 k1_xboole_0 k4_ordinal1 \quad (4)$$

Assume the following.

$$\forall X0.(X0 \in u1_struct_0 \ k2_robbins4) \Rightarrow (r1_tarski \ X0 \ (k1_enumset1 \ k6_numbers \ np_1 \ np_2)) \quad (5)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 \ np_2) \wedge (m2_subset_1 \ np_2 \ k1_numbers \ k5_numbers)) \wedge \\ & ((m1_subset_1 \ np_2 \ k5_numbers) \wedge (m1_subset_1 \ np_2 \ k1_numbers)) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 \ np_1) \wedge (m2_subset_1 \ np_1 \ k1_numbers \ k5_numbers)) \wedge \\ & ((m1_subset_1 \ np_1 \ k5_numbers) \wedge (m1_subset_1 \ np_1 \ k1_numbers)) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 \ X0) \wedge ((v6_lattices \ X0) \wedge ((v8_lattices \ X0) \wedge ((v9_lattices \ X0) \wedge (l3_lattices \ X0)))))) \wedge \\ & ((m1_subset_1 \ X1 \ (u1_struct_0 \ X0)) \wedge (m1_subset_1 \ X2 \ (u1_struct_0 \ X0))) \Rightarrow ((r3_lattices \ X0 \ X1 \ X2) \Leftrightarrow (r1_lattices \ X0 \ X1 \ X2)) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0 \ X0) \wedge \\ & ((m1_subset_1 \ X1 \ X0) \wedge ((m1_subset_1 \ X2 \ X0) \wedge (m1_subset_1 \ X3 \ X0)))) \Rightarrow \\ & (k8_domain_1 \ X0 \ X1 \ X2 \ X3 = k1_enumset1 \ X1 \ X2 \ X3) \end{aligned} \quad (9)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (10)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 \ X0) \wedge ((v4_lattices \ X0) \wedge (l2_lattices \ X0)))) \wedge ((m1_subset_1 \ X1 \ (u1_struct_0 \ X0)) \wedge \\ & (m1_subset_1 \ X2 \ (u1_struct_0 \ X0))) \Rightarrow (k3_lattices \ X0 \ X1 \ X2 = k1_lattices \ X0 \ X1 \ X2) \end{aligned} \quad (12)$$

Assume the following.

$$(v10_lattices \ k2_robbins4) \wedge (v4_robbins1 \ k2_robbins4) \quad (13)$$

Assume the following.

$$(\neg v1_xboole_0 \ k4_ordinal1) \wedge (v3_ordinal1 \ k4_ordinal1) \quad (14)$$

Assume the following.

$$(\neg v2_struct_0\ k2_robbins4) \wedge (v4_robbins1\ k2_robbins4) \quad (15)$$

Assume the following.

$$\forall X0. ((\neg v2_struct_0\ X0) \wedge (l1_struct_0\ X0)) \Rightarrow (\neg v1_xboole_0\ (u1_struct_0\ X0)) \quad (16)$$

Assume the following.

$$\forall X0. (l4_robbins1\ X0) \Rightarrow ((l2_robbins1\ X0) \wedge (l3_lattices\ X0)) \quad (17)$$

Assume the following.

$$\forall X0. (l2_robbins1\ X0) \Rightarrow ((l2_lattices\ X0) \wedge (l1_robbins1\ X0)) \quad (18)$$

Assume the following.

$$\forall X0. (l2_lattices\ X0) \Rightarrow (l1_struct_0\ X0) \quad (19)$$

Assume the following.

$$(v4_robbins1\ k2_robbins4) \wedge (l4_robbins1\ k2_robbins4) \quad (20)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0\ X0) \wedge (l2_lattices\ X0)) \Rightarrow (\forall X1. \\ & (m1_subset_1\ X1\ (u1_struct_0\ X0)) \Rightarrow (\forall X2. (m1_subset_1\ X2 \\ & (u1_struct_0\ X0)) \Rightarrow ((r1_lattices\ X0\ X1\ X2) \Leftrightarrow (k1_lattices\ X0\ X1\ X2 = \\ & X2)))) \end{aligned} \quad (21)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0\ X0) \wedge (v4_lattices \\ & X0) \wedge (l2_lattices\ X0)) \wedge (m1_subset_1\ X1\ (u1_struct_0\ X0)) \wedge \\ & m1_subset_1\ X2\ (u1_struct_0\ X0))) \Rightarrow (k3_lattices\ X0\ X1\ X2 = k3_lattices \\ & X0\ X2\ X1) \end{aligned} \quad (22)$$

Assume the following.

$$\begin{aligned} & \forall X0. (l3_lattices\ X0) \Rightarrow (((\neg v2_struct_0\ X0) \wedge (v10_lattices \\ & X0)) \Rightarrow ((\neg v2_struct_0\ X0) \wedge (v4_lattices\ X0) \wedge (v5_lattices\ X0) \wedge \\ & ((v6_lattices\ X0) \wedge (v7_lattices\ X0) \wedge (v8_lattices\ X0) \wedge (v9_lattices \\ & X0)))))) \end{aligned} \quad (23)$$

Theorem 1

$$\begin{aligned} & \forall X0. (m1_subset_1\ X0\ (u1_struct_0\ k2_robbins4)) \Rightarrow (\forall X1. \\ & (m1_subset_1\ X1\ (u1_struct_0\ k2_robbins4)) \Rightarrow ((X0 = np_3) \Rightarrow (k3_lattices \\ & k2_robbins4\ X0\ X1 = X0))) \end{aligned}$$