

t25_robbins4 (TMabaED-
jUacZqu1UD9NW7rJf3kYoNdm19KN)

October 27, 2020

Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k2_robbins4 : \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k4_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ 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 $k2_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $r3_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v6_lattices : \iota \Rightarrow o$ be given. Let $l1_lattices : \iota \Rightarrow o$ be given. Let $v10_lattices : \iota \Rightarrow o$ be given. Let $v4_robbins1 : \iota \Rightarrow o$ be given. Let $l4_robbins1 : \iota \Rightarrow o$ be given. Let $l2_robbins1 : \iota \Rightarrow o$ be given. Let $l2_lattices : \iota \Rightarrow o$ be given. Let $v4_lattices : \iota \Rightarrow o$ be given. Let $v5_lattices : \iota \Rightarrow o$ be given. Let $v7_lattices : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v8_lattices X0) \wedge ((v9_lattices \\ X0) \wedge (l3_lattices X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow ((r1_lattices \\ X0 X1 X2) \Leftrightarrow (k2_lattices X0 X1 X2 = X1)))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.r1_tarski k1_xboole_0 X0 \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_subset_1 X0 (u1_struct_0 k2_robbins4)) \Rightarrow (\forall X1. \\ (m1_subset_1 X1 (u1_struct_0 k2_robbins4)) \Rightarrow ((r3_lattices k2_robbins4 \\ X0 X1) \Leftrightarrow (r1_tarski X0 X1))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0) \wedge ((v6_lattices \\ X0) \wedge ((v8_lattices X0) \wedge ((v9_lattices X0) \wedge (l3_lattices X0)))) \wedge \\ ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge (m1_subset_1 X2 (u1_struct_0 \\ X0)))) \Rightarrow ((r3_lattices X0 X1 X2) \Leftrightarrow (r1_lattices X0 X1 X2))) \end{aligned} \quad (4)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge (v6_lattices \\ X0) \wedge (l1_lattices X0))) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge \\ m1_subset_1 X2 (u1_struct_0 X0))) \Rightarrow (k4_lattices X0 X1 X2 = k2_lattices \\ X0 X1 X2) \end{aligned} \quad (6)$$

Assume the following.

$$(v10_lattices k2_robbins4) \wedge (v4_robbins1 k2_robbins4) \quad (7)$$

Assume the following.

$$(\neg v2_struct_0 k2_robbins4) \wedge (v4_robbins1 k2_robbins4) \quad (8)$$

Assume the following.

$$\forall X0. (l4_robbins1 X0) \Rightarrow ((l2_robbins1 X0) \wedge (l3_lattices X0)) \quad (9)$$

Assume the following.

$$\forall X0. (l3_lattices X0) \Rightarrow ((l1_lattices X0) \wedge (l2_lattices X0)) \quad (10)$$

Assume the following.

$$(v4_robbins1 k2_robbins4) \wedge (l4_robbins1 k2_robbins4) \quad (11)$$

Assume the following.

$$\begin{aligned} \forall X0. (l3_lattices X0) \Rightarrow (((\neg v2_struct_0 X0) \wedge (v10_lattices \\ X0)) \Rightarrow ((\neg v2_struct_0 X0) \wedge (v4_lattices X0) \wedge (v5_lattices X0) \wedge \\ ((v6_lattices X0) \wedge (v7_lattices X0) \wedge (v8_lattices X0) \wedge (v9_lattices \\ X0)))))) \end{aligned} \quad (12)$$

Theorem 1

$$\begin{aligned} \forall X0. (m1_subset_1 X0 (u1_struct_0 k2_robbins4)) \Rightarrow (\forall X1. \\ (m1_subset_1 X1 (u1_struct_0 k2_robbins4)) \Rightarrow ((X0 = k6_numbers) \Rightarrow \\ (k4_lattices k2_robbins4 X0 X1 = X0))) \end{aligned}$$