

t46_robbins2 (TMNaNsP- snqX3GbaEEn5to9goPEdXWYUYR1A)

October 27, 2020

Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v1_robbins2 : \iota \Rightarrow o$ be given. Let $l2_robbins1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k5_robbins1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_robbins1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l2_lattices : \iota \Rightarrow o$ be given. Let $l1_robbins1 : \iota \Rightarrow o$ be given. Let $v4_lattices : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v1_robbins2 X0) \wedge (l2_robbins1 \\ & X0))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (k3_robbins1 X0 (k5_robbins1 \\ & X0 X1 (k3_robbins1 X0 (k5_robbins1 X0 X1 (k3_robbins1 X0 X2)))))) = \\ & k3_robbins1 X0 (k5_robbins1 X0 X1 X2))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v1_robbins2 X0) \wedge (l2_robbins1 \\ & X0))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. (m1_subset_1 X3 \\ & (u1_struct_0 X0)) \Rightarrow (k5_robbins1 X0 (k3_robbins1 X0 (k5_robbins1 \\ & X0 (k3_robbins1 X0 (k5_robbins1 X0 X1 X2)) (k3_robbins1 X0 (k5_robbins1 \\ & X0 (k3_robbins1 X0 (k5_robbins1 X0 X1 X2)) (k3_robbins1 X0 (k5_robbins1 \\ & X0 X1 X3)))))) X2 = X2))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0. (l2_robbins1 X0) \Rightarrow ((l2_lattices X0) \wedge (l1_robbins1 X0)) \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge ((v4_lattices \\ & X0) \wedge (l2_robbins1 X0))) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge \\ & m1_subset_1 X2 (u1_struct_0 X0))) \Rightarrow (m1_subset_1 (k5_robbins1 \\ & X0 X1 X2) (u1_struct_0 X0)) \end{aligned} \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2_struct_0 X0)\wedge(l1_robbins1 X0))\wedge(m1_subset_1 X1 (u1_struct_0 X0)))\Rightarrow(m1_subset_1 (k3_robbins1 X0 X1) (u1_struct_0 X0)) \quad (5)$$

Assume the following.

$$\forall X0.(l2_robbins1 X0)\Rightarrow(((\neg v2_struct_0 X0)\wedge(v1_robbins2 X0))\Rightarrow((\neg v2_struct_0 X0)\wedge(v4_lattices X0))) \quad (6)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge((v1_robbins2 X0)\wedge(l2_robbins1 X0)))\Rightarrow(\forall X1.(m1_subset_1 X1 (u1_struct_0 X0))\Rightarrow(\forall X2. \\ & (m1_subset_1 X2 (u1_struct_0 X0))\Rightarrow(\forall X3.(m1_subset_1 X3 \\ & (u1_struct_0 X0))\Rightarrow(k5_robbins1 X0 (k3_robbins1 X0 (k5_robbins1 \\ & X0 (k3_robbins1 X0 (k5_robbins1 X0 X1 X2)) (k5_robbins1 X0 X1 X3))) \\ & X2 = X2)))) \end{aligned}$$