

t22_robbins1
(TMTrff63451STYorfrja3EzRa3p2ShCMWHR)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v4_lattices : \iota \Rightarrow o$ be given. Let $v5_lattices : \iota \Rightarrow o$ be given. Let $v6_robbins1 : \iota \Rightarrow o$ 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 $k6_lattices : \iota \Rightarrow \iota$ be given. Let $k1_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l2_lattices : \iota \Rightarrow o$ be given. Let $l1_robbins1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge (v4_lattices \\ & X0) \wedge (l2_robbins1 X0))) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge \\ & m1_subset_1 X2 (u1_struct_0 X0))) \Rightarrow (k5_robbins1 X0 X1 X2 = k1_lattices \\ & X0 X1 X2) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. (l2_robbins1 X0) \Rightarrow ((l2_lattices X0) \wedge (l1_robbins1 X0)) \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge (l1_robbins1 X0)) \wedge \\ & (m1_subset_1 X1 (u1_struct_0 X0))) \Rightarrow (m1_subset_1 (k3_robbins1 \\ & X0 X1) (u1_struct_0 X0)) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (l2_robbins1 X0)) \Rightarrow ((v6_robbins1 \\ & X0) \Leftrightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (k1_lattices X0 (k3_robbins1 \\ & X0 (k1_lattices X0 (k3_robbins1 X0 X1) (k3_robbins1 X0 X2)))) (k3_robbins1 \\ & X0 (k1_lattices X0 (k3_robbins1 X0 X1) X2) = X1)))) \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0)\wedge((v4_lattices \\ & X0)\wedge(l2_robbins1 X0)))\wedge((m1_subset_1 X1 (u1_struct_0 X0))\wedge \\ & m1_subset_1 X2 (u1_struct_0 X0))))\Rightarrow(k5_robbins1 X0 X1 X2 = k5_robbins1 \\ & X0 X2 X1) \end{aligned} \tag{5}$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge((v4_lattices X0)\wedge((v5_lattices \\ & X0)\wedge((v6_robbins1 X0)\wedge(l2_robbins1 X0))))))\Rightarrow(\forall X1.(m1_subset_1 \\ & X1 (u1_struct_0 X0))\Rightarrow(\forall X2.(m1_subset_1 X2 (u1_struct_0 \\ & X0))\Rightarrow(((k5_robbins1 X0 (k3_robbins1 X0 X1) X2 = k6_lattices X0)\wedge \\ & (k5_robbins1 X0 (k3_robbins1 X0 X2) X1 = k6_lattices X0))\Rightarrow(X1 = X2)))))) \end{aligned}$$