

t32_robbins1 (TMHRGdtY- hAXJVvYyJUyTqf8zWQvkRGG9k52)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v10_lattices : \iota \Rightarrow o$ be given. Let $v11_lattices : \iota \Rightarrow o$ be given. Let $v8_robbins1 : \iota \Rightarrow o$ be given. Let $l4_robbins1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k3_robbins1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l3_lattices : \iota \Rightarrow o$ be given. Let $k4_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v6_lattices : \iota \Rightarrow o$ be given. Let $l1_lattices : \iota \Rightarrow o$ be given. Let $k2_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $l2_robbins1 : \iota \Rightarrow o$ be given. Let $l1_robbins1 : \iota \Rightarrow o$ be given. Let $r2_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_lattices : \iota \Rightarrow \iota$ be given. Let $k5_lattices : \iota \Rightarrow \iota$ be given. Let $v5_lattices : \iota \Rightarrow o$ be given. Let $v7_lattices : \iota \Rightarrow o$ be given. Let $v8_lattices : \iota \Rightarrow o$ be given. Let $v9_lattices : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v10_lattices X0) \wedge ((v11_lattices \\ & X0) \wedge (l3_lattices X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (((k4_lattices X0 X1 X2 = k4_lattices \\ & X0 X1 X3) \wedge (k3_lattices X0 X1 X2 = k3_lattices X0 X1 X3)) \Rightarrow (X2 = X3)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge ((v6_lattices \\ & X0) \wedge (l1_lattices X0))) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge \\ & m1_subset_1 X2 (u1_struct_0 X0))) \Rightarrow (k4_lattices X0 X1 X2 = k2_lattices \\ & X0 X1 X2) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge ((v4_lattices \\ & X0) \wedge (l2_lattices X0))) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge \\ & m1_subset_1 X2 (u1_struct_0 X0))) \Rightarrow (k3_lattices X0 X1 X2 = k1_lattices \\ & X0 X1 X2) \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0.(l4_robbins1\ X0)\Rightarrow((l2_robbins1\ X0)\wedge(l3_lattices\ X0)) \quad (4)$$

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$$\forall X0.(l3_lattices\ X0)\Rightarrow((l1_lattices\ X0)\wedge(l2_lattices\ X0)) \quad (5)$$

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$$\forall X0.(l2_robbins1\ X0)\Rightarrow((l2_lattices\ X0)\wedge(l1_robbins1\ X0)) \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(((\neg v2_struct_0\ X0)\wedge(l1_robbins1\ X0))\wedge \\ (m1_subset_1\ X1\ (u1_struct_0\ X0)))\Rightarrow(m1_subset_1\ (k3_robbins1 \\ X0\ X1)\ (u1_struct_0\ X0)) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0\ X0)\wedge(l3_lattices\ X0))\Rightarrow(\forall X1. \\ (m1_subset_1\ X1\ (u1_struct_0\ X0))\Rightarrow(\forall X2.(m1_subset_1\ X2 \\ (u1_struct_0\ X0))\Rightarrow((r2_lattices\ X0\ X1\ X2)\Leftrightarrow((k1_lattices\ X0\ X1 \\ X2 = k6_lattices\ X0)\wedge((k1_lattices\ X0\ X2\ X1 = k6_lattices\ X0)\wedge((\\ k2_lattices\ X0\ X1\ X2 = k5_lattices\ X0)\wedge(k2_lattices\ X0\ X2\ X1 = k5_lattices \\ X0))))))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0\ X0)\wedge(l4_robbins1\ X0))\Rightarrow((v8_robbins1 \\ X0)\Leftrightarrow(\forall X1.(m1_subset_1\ X1\ (u1_struct_0\ X0))\Rightarrow(r2_lattices \\ X0\ (k3_robbins1\ X0\ X1)\ X1))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.(l3_lattices\ X0)\Rightarrow(((\neg v2_struct_0\ X0)\wedge(v10_lattices \\ X0))\Rightarrow((\neg v2_struct_0\ X0)\wedge((v4_lattices\ X0)\wedge((v5_lattices\ X0)\wedge \\ ((v6_lattices\ X0)\wedge((v7_lattices\ X0)\wedge((v8_lattices\ X0)\wedge(v9_lattices \\ X0)))))))) \end{aligned} \quad (10)$$

Theorem 1

$$\begin{aligned} \forall X0.((\neg v2_struct_0\ X0)\wedge((v10_lattices\ X0)\wedge((v11_lattices \\ X0)\wedge((v8_robbins1\ X0)\wedge(l4_robbins1\ X0)))))\Rightarrow(\forall X1.(m1_subset_1 \\ X1\ (u1_struct_0\ X0))\Rightarrow(k3_robbins1\ X0\ (k3_robbins1\ X0\ X1) = X1)) \end{aligned}$$