

t7_robins1 (TMb-
siT5fGtMy86mHiDGS5qCt69Rin8NMHSG)

October 27, 2020

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 $v6_robins1 : \iota \Rightarrow o$ be given. Let $v7_robins1 : \iota \Rightarrow o$ be given. Let $l2_robins1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k4_robins1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_robins1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_robins1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l2_lattices : \iota \Rightarrow o$ be given. Let $l1_robins1 : \iota \Rightarrow o$ be given. Let $v14_lattices : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v4_lattices X0) \wedge ((v5_lattices \\ & X0) \wedge ((v6_robins1 X0) \wedge ((v7_robins1 X0) \wedge (l2_robins1 X0)))))) \Rightarrow \\ & (\exists X1.(m1_subset_1 X1 (u1_struct_0 X0)) \wedge (\forall X2.(m1_subset_1 \\ & X2 (u1_struct_0 X0)) \Rightarrow ((k5_robins1 X0 X1 X2 = X1) \wedge (k5_robins1 \\ & X0 X2 (k3_robins1 X0 X2) = X1)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v4_lattices X0) \wedge ((v5_lattices \\ & X0) \wedge ((v6_robins1 X0) \wedge (l2_robins1 X0)))))) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 (u1_struct_0 X0)) \Rightarrow (k3_robins1 X0 (k3_robins1 X0 X1) = X1)) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge ((v4_lattices \\ & X0) \wedge (l2_robins1 X0))) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge \\ & m1_subset_1 X2 (u1_struct_0 X0))) \Rightarrow (k5_robins1 X0 X1 X2 = k1_lattices \\ & X0 X1 X2) \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0.(l2_robins1 X0) \Rightarrow ((l2_lattices X0) \wedge (l1_robins1 X0)) \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge (l1_robins1 X0)) \wedge \\ & (m1_subset_1 X1 (u1_struct_0 X0))) \Rightarrow (m1_subset_1 (k3_robins1 \\ & X0 X1) (u1_struct_0 X0)) \end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l2_robbins1 X0)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 \\ & (u1_struct_0 X0)) \Rightarrow (k4_robbins1 X0 X1 X2 = k3_robbins1 X0 (k1_lattices \\ & X0 (k3_robbins1 X0 X1) (k3_robbins1 X0 X2)))))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l2_lattices X0)) \Rightarrow ((v14_lattices \\ & X0) \Leftrightarrow (\exists X1.(m1_subset_1 X1 (u1_struct_0 X0)) \wedge (\forall X2. \\ & (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow ((k1_lattices X0 X1 X2 = X1) \wedge \\ & (k1_lattices X0 X2 X1 = X1)))))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0) \wedge ((v4_lattices \\ & X0) \wedge (l2_robbins1 X0))) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge \\ & m1_subset_1 X2 (u1_struct_0 X0))) \Rightarrow (k5_robbins1 X0 X1 X2 = k5_robbins1 \\ & X0 X2 X1)) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l2_robbins1 X0) \Rightarrow (((\neg v2_struct_0 X0) \wedge ((v4_lattices \\ & X0) \wedge ((v5_lattices X0) \wedge ((v6_robbins1 X0) \wedge (v7_robbins1 X0)))) \Rightarrow \\ & ((\neg v2_struct_0 X0) \wedge (v14_lattices X0))) \end{aligned} \quad (9)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v4_lattices X0) \wedge ((v5_lattices \\ & X0) \wedge ((v6_robbins1 X0) \wedge ((v7_robbins1 X0) \wedge (l2_robbins1 X0)))))) \Rightarrow \\ & (\exists X1.(m1_subset_1 X1 (u1_struct_0 X0)) \wedge (\forall X2.(m1_subset_1 \\ & X2 (u1_struct_0 X0)) \Rightarrow ((k4_robbins1 X0 X1 X2 = X1) \wedge (k3_robbins1 \\ & X0 (k5_robbins1 X0 X2) (k3_robbins1 X0 X2)) = X1)))) \end{aligned}$$