

t42_robbins1

(TMRbsrd66cZkMkZrDLiFWviJhizQTGyJAXD)

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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 $l2_robbins1 : \iota \Rightarrow o$ 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 $k16_robbins1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11_robbins1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k15_robbins1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k13_robbins1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l2_lattices : \iota \Rightarrow o$ be given. Let $l1_robbins1 : \iota \Rightarrow o$ be given. Let $k12_robbins1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k14_robbins1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge (v4_lattices \\ & X0) \wedge (l2_robbins1 X0))) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge \\ & m1_subset_1 X2 (u1_struct_0 X0))) \Rightarrow (m1_subset_1 (k5_robbins1 \\ & X0 X1 X2) (u1_struct_0 X0)) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge (l2_robbins1 X0)) \wedge \\ & (m1_subset_1 X1 (u1_struct_0 X0))) \Rightarrow (m1_subset_1 (k11_robbins1 \\ & X0 X1) (u1_struct_0 X0)) \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge (l2_lattices X0)) \Rightarrow ((v5_lattices \\ X0) \Leftrightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\ (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 \\ (u1_struct_0 X0)) \Rightarrow (k1_lattices X0 X1 (k1_lattices X0 X2 X3) = k1_lattices \\ X0 (k1_lattices X0 X1 X2) X3)))))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge (l2_robbins1 X0)) \Rightarrow (\forall X1. \\ (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (k16_robbins1 X0 X1 = k1_lattices \\ X0 (k11_robbins1 X0 X1) (k1_lattices X0 (k12_robbins1 X0 X1) (k12_robbins1 \\ X0 X1)))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge (l2_robbins1 X0)) \Rightarrow (\forall X1. \\ (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (k15_robbins1 X0 X1 = k1_lattices \\ X0 (k11_robbins1 X0 X1) (k1_lattices X0 (k12_robbins1 X0 X1) X1))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge (l2_robbins1 X0)) \Rightarrow (\forall X1. \\ (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (k14_robbins1 X0 X1 = k1_lattices \\ X0 (k11_robbins1 X0 X1) (k12_robbins1 X0 X1))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge (l2_robbins1 X0)) \Rightarrow (\forall X1. \\ (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (k13_robbins1 X0 X1 = k1_lattices \\ X0 (k11_robbins1 X0 X1) X1)) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge (l2_robbins1 X0)) \Rightarrow (\forall X1. \\ (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (k12_robbins1 X0 X1 = k1_lattices \\ X0 X1 X1)) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge ((v4_lattices \\ X0) \wedge (l2_robbins1 X0))) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge (\\ m1_subset_1 X2 (u1_struct_0 X0)))) \Rightarrow (k5_robbins1 X0 X1 X2 = k5_robbins1 \\ X0 X2 X1) \end{aligned} \quad (11)$$

Theorem 1

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v4_lattices X0) \wedge ((v5_lattices \\ & X0) \wedge ((v5_robbins1 X0) \wedge (l2_robbins1 X0)))))) \Rightarrow (\forall X1. (m1_subset_1 \\ & X1 (u1_struct_0 X0)) \Rightarrow (k5_robbins1 X0 (k16_robbins1 X0 X1) (k11_robbins1 \\ & X0 X1) = k5_robbins1 X0 (k15_robbins1 X0 X1) (k13_robbins1 X0 X1))) \end{aligned}$$