

t34_robbins1 (TM-
MUE_{xv}ZNZX7TqNEkeEq1HtUuig69PuMN6B)

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Let $v2_struct_0 : \iota \Rightarrow o$ 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 $k8_robbins1 : \iota \Rightarrow \iota$ be given. Let $k4_robbins1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_robbins1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k5_binop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_binop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v4_robbins1 : \iota \Rightarrow o$ be given. Let $l1_lattices : \iota \Rightarrow o$ be given. Let $u1_lattices : \iota \Rightarrow \iota$ be given. Let $l4_robbins1 : \iota \Rightarrow o$ be given. Let $l3_lattices : \iota \Rightarrow o$ be given. Let $l2_lattices : \iota \Rightarrow o$ be given. Let $l1_robbins1 : \iota \Rightarrow o$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_robbins1 : \iota \Rightarrow \iota$ be given. Let $u2_lattices : \iota \Rightarrow \iota$ be given. Let $g4_robbins1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. (((v1_funct_1 X1) \wedge \\ & ((v1_funct_2 X1 (k2_zfmisc_1 X0 X0) X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ & (k2_zfmisc_1 (k2_zfmisc_1 X0 X0) X0)))))) \wedge ((m1_subset_1 X2 X0) \wedge \\ & (m1_subset_1 X3 X0))) \Rightarrow (k5_binop_1 X0 X1 X2 X3 = k1_binop_1 X1 X2 X3) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0. ((\neg v2_struct_0 X0) \wedge (l2_robbins1 X0)) \Rightarrow ((\neg v2_struct_0 (k8_robbins1 X0)) \wedge (v4_robbins1 (k8_robbins1 X0))) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. (l1_lattices X0) \Rightarrow ((v1_funct_1 (u1_lattices X0)) \wedge \\ & ((v1_funct_2 (u1_lattices X0) (k2_zfmisc_1 (u1_struct_0 X0) (\\ & u1_struct_0 X0)) (u1_struct_0 X0)) \wedge (m1_subset_1 (u1_lattices \\ & X0) (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (\\ & u1_struct_0 X0)) (u1_struct_0 X0)))))) \end{aligned} \quad (3)$$

Assume the following.

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

Assume the following.

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

Assume the following.

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

Assume the following.

$$\forall X0.((\neg v2_struct_0\ X0)\wedge(l2_robbins1\ X0))\Rightarrow((v4_robbins1\ (k8_robbins1\ X0))\wedge(l4_robbins1\ (k8_robbins1\ X0))) \quad (7)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0\ X0)\wedge(l1_robbins1\ X0))\Rightarrow(\forall X1.(m1_subset_1\ X1\ (u1_struct_0\ X0))\Rightarrow(k3_robbins1\ X0\ X1 = k3_funct_2\ (u1_struct_0\ X0)\ (u1_struct_0\ X0)\ (u1_robbins1\ X0)\ X1)) \quad (8)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0\ X0)\wedge(l1_lattices\ X0))\Rightarrow(\forall X1.(m1_subset_1\ X1\ (u1_struct_0\ X0))\Rightarrow(\forall X2.(m1_subset_1\ X2\ (u1_struct_0\ X0))\Rightarrow(k2_lattices\ X0\ X1\ X2 = k5_binop_1\ (u1_struct_0\ X0)\ (u1_lattices\ X0)\ X1\ X2))) \quad (9)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0\ X0)\wedge(l2_lattices\ X0))\Rightarrow(\forall X1.(m1_subset_1\ X1\ (u1_struct_0\ X0))\Rightarrow(\forall X2.(m1_subset_1\ X2\ (u1_struct_0\ X0))\Rightarrow(k1_lattices\ X0\ X1\ X2 = k5_binop_1\ (u1_struct_0\ X0)\ (u2_lattices\ X0)\ X1\ X2))) \quad (10)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0\ X0)\wedge(l2_robbins1\ X0))\Rightarrow(\forall X1.((v4_robbins1\ X1)\wedge(l4_robbins1\ X1))\Rightarrow((X1 = k8_robbins1\ X0)\Leftrightarrow((u1_struct_0\ X1 = u1_struct_0\ X0)\wedge((u2_lattices\ X1 = u2_lattices\ X0)\wedge((u1_robbins1\ X1 = u1_robbins1\ X0)\wedge(\forall X2.(m1_subset_1\ X2\ (u1_struct_0\ X0))\Rightarrow(\forall X3.(m1_subset_1\ X3\ (u1_struct_0\ X0))\Rightarrow(k1_binop_1\ (u1_lattices\ X1)\ X2\ X3 = k4_robbins1\ X0\ X2\ X3)))))))))) \quad (11)$$

Assume the following.

$$\forall X0.(l4_robbins1\ X0)\Rightarrow((v4_robbins1\ X0)\Rightarrow(X0 = g4_robbins1\ (u1_struct_0\ X0)\ (u2_lattices\ X0)\ (u1_lattices\ X0)\ (u1_robbins1\ X0))) \quad (12)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l2_robbins1 X0)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 \\ & (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 (\\ & k8_robbins1 X0))) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 (\\ & k8_robbins1 X0))) \Rightarrow (((X1 = X3) \wedge (X2 = X4)) \Rightarrow ((k4_robbins1 X0 X1 X2 = \\ & k2_lattices (k8_robbins1 X0) X3 X4) \wedge ((k1_lattices X0 X1 X2 = k1_lattices \\ & (k8_robbins1 X0) X3 X4) \wedge (k3_robbins1 X0 X1 = k3_robbins1 (k8_robbins1 \\ & X0) X3)))))))))) \end{aligned}$$