

# t9\_robbins4

(TMZH1De4fnHs5kcqeCZcGTa3duVxwA1tdP9)

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Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k2\_robbins4 : \iota$  be given. Let  $k4\_enumset1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $k6\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_3 : \iota$  be given. Let  $np\_2 : \iota$  be given. Let  $k2\_yellow\_1 : \iota \Rightarrow \iota$  be given. Let  $u1\_orders\_2 : \iota \Rightarrow \iota$  be given. Let  $k1\_yellow\_1 : \iota \Rightarrow \iota$  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  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $g3\_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $g1\_orders\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_orders\_2 : \iota \Rightarrow o$  be given. Let  $v3\_orders\_2 : \iota \Rightarrow o$  be given. Let  $v4\_orders\_2 : \iota \Rightarrow o$  be given. Let  $v5\_orders\_2 : \iota \Rightarrow o$  be given. Let  $v1\_lattice3 : \iota \Rightarrow o$  be given. Let  $k1\_robbins4 : \iota$  be given. Let  $v2\_lattice3 : \iota \Rightarrow o$  be given. Let  $l2\_lattices : \iota \Rightarrow o$  be given. Let  $u2\_lattices : \iota \Rightarrow \iota$  be given. Let  $l1\_lattices : \iota \Rightarrow o$  be given. Let  $u1\_lattices : \iota \Rightarrow \iota$  be given. Let  $l3\_lattices : \iota \Rightarrow o$  be given. Let  $l1\_orders\_2 : \iota \Rightarrow o$  be given. Let  $v4\_robbins1 : \iota \Rightarrow o$  be given. Let  $l4\_robbins1 : \iota \Rightarrow o$  be given. Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v10\_lattices : \iota \Rightarrow o$  be given. Let  $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_lattice3 : \iota \Rightarrow \iota$  be given. Let  $v1\_relat\_2 : \iota \Rightarrow o$  be given. Let  $v4\_relat\_2 : \iota \Rightarrow o$  be given. Let  $v8\_relat\_2 : \iota \Rightarrow o$  be given. Let  $k14\_lattice3 : \iota \Rightarrow \iota$  be given. Let  $v3\_lattices : \iota \Rightarrow o$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $u1\_robbins1 : \iota \Rightarrow \iota$  be given. Let  $k3\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_lattice3 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0.(u1\_struct\_0 (k2\_yellow\_1 X0) = X0) \wedge (u1\_orders\_2 (k2\_yellow\_1 X0) = k1\_yellow\_1 X0) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((v1\_funct\_1 X1) \wedge ((v1\_funct\_2 X1 (k2\_zfmisc\_1 X0 X0) X0) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k2\_zfmisc\_1 X0 X0) X0)))))) \wedge ((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 (k2\_zfmisc\_1 X0 X0) X0) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k2\_zfmisc\_1 X0 X0) X0)))))) \Rightarrow (\forall X3.\forall X4.\forall X5. \\ & (g3\_lattices X0 X1 X2 = g3\_lattices X3 X4 X5) \Rightarrow ((X0 = X3) \wedge ((X1 = X4) \wedge (X2 = X5)))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X0)))\Rightarrow(\forall X2.\forall X3.(g1\_orders\_2 X0 X1 = g1\_orders\_2 X2 X3)\Rightarrow((X0 = X2)\wedge(X1 = X3))) \quad (3)$$

Assume the following.

$$\forall X0.(v1\_orders\_2 (k2\_yellow\_1 X0))\wedge((v3\_orders\_2 (k2\_yellow\_1 X0))\wedge((v4\_orders\_2 (k2\_yellow\_1 X0))\wedge(v5\_orders\_2 (k2\_yellow\_1 X0)))) \quad (4)$$

Assume the following.

$$(v1\_lattice3 k1\_robbins4)\wedge(v2\_lattice3 k1\_robbins4) \quad (5)$$

Assume the following.

$$\forall X0.(l2\_lattices X0)\Rightarrow((v1\_funct\_1 (u2\_lattices X0))\wedge((v1\_funct\_2 (u2\_lattices X0) (k2\_zfmisc\_1 (u1\_struct\_0 X0) (u1\_struct\_0 X0)) (u1\_struct\_0 X0))\wedge(m1\_subset\_1 (u2\_lattices X0) (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 X0) (u1\_struct\_0 X0)) (u1\_struct\_0 X0)))))) \quad (6)$$

Assume the following.

$$\forall X0.(l1\_lattices X0)\Rightarrow((v1\_funct\_1 (u1\_lattices X0))\wedge((v1\_funct\_2 (u1\_lattices X0) (k2\_zfmisc\_1 (u1\_struct\_0 X0) (u1\_struct\_0 X0)) (u1\_struct\_0 X0))\wedge(m1\_subset\_1 (u1\_lattices X0) (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 X0) (u1\_struct\_0 X0)) (u1\_struct\_0 X0)))))) \quad (7)$$

Assume the following.

$$\forall X0.(l3\_lattices X0)\Rightarrow((l1\_lattices X0)\wedge(l2\_lattices X0)) \quad (8)$$

Assume the following.

$$\forall X0.(v1\_orders\_2 (k2\_yellow\_1 X0))\wedge(l1\_orders\_2 (k2\_yellow\_1 X0)) \quad (9)$$

Assume the following.

$$(v4\_robbins1 k2\_robbins4)\wedge(l4\_robbins1 k2\_robbins4) \quad (10)$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0 X0)\wedge((v10\_lattices X0)\wedge(l3\_lattices X0)))\Rightarrow((v1\_partfun1 (k2\_lattice3 X0) (u1\_struct\_0 X0))\wedge((v1\_relat\_2 (k2\_lattice3 X0))\wedge((v4\_relat\_2 (k2\_lattice3 X0))\wedge((v8\_relat\_2 (k2\_lattice3 X0))\wedge(m1\_subset\_1 (k2\_lattice3 X0) (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 X0) (u1\_struct\_0 X0)))))))) \quad (11)$$

Assume the following.

$$\begin{aligned} \forall X0. (& (l1\_orders\_2 X0) \Rightarrow ((\neg v2\_struct\_0 (k14\_lattice3 X0)) \wedge \\ & ((v3\_lattices (k14\_lattice3 X0)) \wedge ((v10\_lattices (k14\_lattice3 \\ & X0)) \wedge (l3\_lattices (k14\_lattice3 X0)))))) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} \forall X0. (& (v4\_robbins1 X0) \wedge (l4\_robbins1 X0)) \Rightarrow ((X0 = k2\_robbins4) \Leftrightarrow \\ & ((g3\_lattices (u1\_struct\_0 X0) (u2\_lattices X0) (u1\_lattices \\ & X0) = k14\_lattice3 k1\_robbins4) \wedge (\forall X1. (m1\_subset\_1 X1 ( \\ & u1\_struct\_0 X0)) \Rightarrow (\forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 np\_3)) \Rightarrow \\ & ((X1 = X2) \Rightarrow (k1\_funct\_1 (u1\_robbins1 X0) X1 = k3\_subset\_1 np\_3 X2)))))) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} k1\_robbins4 = & k2\_yellow\_1 (k4\_enumset1 k6\_numbers np\_1 (k6\_subset\_1 \\ & np\_3 np\_1) np\_2 (k6\_subset\_1 np\_3 np\_2) np\_3) \end{aligned} \quad (14)$$

Assume the following.

$$\begin{aligned} \forall X0. (& (\neg v2\_struct\_0 X0) \wedge ((v10\_lattices X0) \wedge (l3\_lattices \\ & X0))) \Rightarrow (k3\_lattice3 X0 = g1\_orders\_2 (u1\_struct\_0 X0) (k2\_lattice3 \\ & X0)) \end{aligned} \quad (15)$$

Assume the following.

$$\begin{aligned} \forall X0. (& (l1\_orders\_2 X0) \Rightarrow (((v3\_orders\_2 X0) \wedge ((v4\_orders\_2 \\ & X0) \wedge ((v5\_orders\_2 X0) \wedge ((v1\_lattice3 X0) \wedge ((v2\_lattice3 X0) \wedge \\ & (l1\_orders\_2 X0)))))) \Rightarrow (\forall X1. ((\neg v2\_struct\_0 X1) \wedge ((v3\_lattices \\ & X1) \wedge ((v10\_lattices X1) \wedge (l3\_lattices X1)))) \Rightarrow ((X1 = k14\_lattice3 \\ & X0) \Leftrightarrow (g1\_orders\_2 (u1\_struct\_0 X0) (u1\_orders\_2 X0) = k3\_lattice3 \\ & X1)))))) \end{aligned} \quad (16)$$

Assume the following.

$$\begin{aligned} \forall X0. (& (l3\_lattices X0) \Rightarrow ((v3\_lattices X0) \Rightarrow (X0 = g3\_lattices \\ & (u1\_struct\_0 X0) (u2\_lattices X0) (u1\_lattices X0)))) \end{aligned} \quad (17)$$

Assume the following.

$$\begin{aligned} \forall X0. (& (l1\_orders\_2 X0) \Rightarrow ((v1\_orders\_2 X0) \Rightarrow (X0 = g1\_orders\_2 \\ & (u1\_struct\_0 X0) (u1\_orders\_2 X0)))) \end{aligned} \quad (18)$$

**Theorem 1**

$$\begin{aligned} u1\_struct\_0 k2\_robbins4 = & k4\_enumset1 k6\_numbers np\_1 (k6\_subset\_1 \\ & np\_3 np\_1) np\_2 (k6\_subset\_1 np\_3 np\_2) np\_3 \end{aligned}$$