

t45\_robins2 (TMd-  
juU6cTNvCqgcGYtC9HwGbCx7PVWwp9yw)

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v1\_robins2 : \iota \Rightarrow o$  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  $k3\_robins1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_robins1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $l2\_lattices : \iota \Rightarrow o$  be given. Let  $l1\_robins1 : \iota \Rightarrow o$  be given. Let  $v4\_lattices : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v1\_robins2 X0) \wedge (l2\_robins1 \\ & X0))) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2. \\ & (m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (k5\_robins1 X0 (k3\_robins1 \\ & X0 (k5\_robins1 X0 X1 X2)) X1 = k5\_robins1 X0 X1 (k3\_robins1 X0 X2)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v1\_robins2 X0) \wedge (l2\_robins1 \\ & X0))) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (k3\_robins1 \\ & X0 (k3\_robins1 X0 X1) = X1)) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. (l2\_robins1 X0) \Rightarrow ((l2\_lattices X0) \wedge (l1\_robins1 X0)) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v2\_struct\_0 X0) \wedge ((v4\_lattices \\ & X0) \wedge (l2\_robins1 X0))) \wedge ((m1\_subset\_1 X1 (u1\_struct\_0 X0)) \wedge \\ & m1\_subset\_1 X2 (u1\_struct\_0 X0))) \Rightarrow (m1\_subset\_1 (k5\_robins1 \\ & X0 X1 X2) (u1\_struct\_0 X0)) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2\_struct\_0 X0) \wedge (l1\_robins1 X0)) \wedge \\ & (m1\_subset\_1 X1 (u1\_struct\_0 X0))) \Rightarrow (m1\_subset\_1 (k3\_robins1 \\ & X0 X1) (u1\_struct\_0 X0)) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2\_struct\_0 X0)\wedge((v4\_lattices X0)\wedge(l2\_robbins1 X0)))\wedge((m1\_subset\_1 X1 (u1\_struct\_0 X0))\wedge(m1\_subset\_1 X2 (u1\_struct\_0 X0))))\Rightarrow(k5\_robbins1 X0 X1 X2 = k5\_robbins1 X0 X2 X1) \quad (6)$$

Assume the following.

$$\forall X0.(l2\_robbins1 X0)\Rightarrow(((\neg v2\_struct\_0 X0)\wedge(v1\_robbins2 X0))\Rightarrow((\neg v2\_struct\_0 X0)\wedge(v4\_lattices X0))) \quad (7)$$

**Theorem 1**

$$\forall X0.((\neg v2\_struct\_0 X0)\wedge((v1\_robbins2 X0)\wedge(l2\_robbins1 X0)))\Rightarrow(\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0))\Rightarrow(\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 X0))\Rightarrow(k3\_robbins1 X0 (k5\_robbins1 X0 X1 (k3\_robbins1 X0 X2)))) = k3\_robbins1 X0 (k5\_robbins1 X0 X1 X2)))$$