

## t6\_robbins2

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v1\_robbins2 : \iota \Rightarrow o$  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  $k3\_robbins1 : \iota \Rightarrow \iota \Rightarrow \iota$  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. Assume the following.

$$\begin{aligned} \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v1\_robbins2 X0) \wedge (l2\_robbins1 \\ X0))) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2. \\ (m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3. (m1\_subset\_1 X3 \\ (u1\_struct\_0 X0)) \Rightarrow (k3\_robbins1 X0 (k1\_lattices X0 (k3\_robbins1 \\ X0 (k1\_lattices X0 X1 X2)) (k3\_robbins1 X0 (k1\_lattices X0 (k3\_robbins1 \\ X0 (k1\_lattices X0 X3 X1)) X2))) = X2)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v1\_robbins2 X0) \wedge (l2\_robbins1 \\ X0))) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (k3\_robbins1 \\ X0 (k1\_lattices X0 (k3\_robbins1 X0 (k1\_lattices X0 X1 (k3\_robbins1 \\ X0 X1))) X1) = k3\_robbins1 X0 X1)) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. (l2\_robbins1 X0) \Rightarrow ((l2\_lattices X0) \wedge (l1\_robbins1 X0)) \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (((\neg v2\_struct\_0 X0) \wedge (l1\_robbins1 X0)) \wedge \\ (m1\_subset\_1 X1 (u1\_struct\_0 X0))) \Rightarrow (m1\_subset\_1 (k3\_robbins1 \\ X0 X1) (u1\_struct\_0 X0)) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. (((\neg v2\_struct\_0 X0) \wedge (l2\_lattices \\ X0)) \wedge ((m1\_subset\_1 X1 (u1\_struct\_0 X0)) \wedge (m1\_subset\_1 X2 (u1\_struct\_0 \\ X0)))) \Rightarrow (m1\_subset\_1 (k1\_lattices X0 X1 X2) (u1\_struct\_0 X0)) \end{aligned} \quad (5)$$

**Theorem 1**

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v1\_robbins2 X0) \wedge (l2\_robbins1 \\ & \quad X0))) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2. \\ & \quad (m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (k3\_robbins1 X0 (k1\_lattices \\ & \quad X0 (k3\_robbins1 X0 (k1\_lattices X0 X1 X2)) (k3\_robbins1 X0 (k1\_lattices \\ & \quad \quad X0 (k3\_robbins1 X0 X1) X2))) = X2))) \end{aligned}$$