

# l61\_robins2 (TMcKWNnFMaR- VwHAhn8SBjDJYLEkhhPBKYeL)

October 27, 2020

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  $v5\_robins1 : \iota \Rightarrow o$  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  $k1\_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v4\_lattices : \iota \Rightarrow o$  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. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v1\_robins2 X0) \wedge (l2\_robins1 \\ & X0))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2. \\ & (m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (k3\_robins1 X0 (k1\_lattices \\ & X0 (k3\_robins1 X0 (k1\_lattices X0 X1 X2)) (k3\_robins1 X0 (k1\_lattices \\ & X0 (k3\_robins1 X0 X1 X2))) = X2))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v2\_struct\_0 X0) \wedge (v4\_lattices \\ & X0) \wedge (l2\_robins1 X0)) \wedge ((m1\_subset\_1 X1 (u1\_struct\_0 X0)) \wedge \\ & m1\_subset\_1 X2 (u1\_struct\_0 X0))) \Rightarrow (k5\_robins1 X0 X1 X2 = k1\_lattices \\ & X0 X1 X2) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.(l2\_robins1 X0) \Rightarrow ((l2\_lattices X0) \wedge (l1\_robins1 X0)) \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2\_struct\_0 X0) \wedge (l1\_robins1 X0)) \wedge \\ & (m1\_subset\_1 X1 (u1\_struct\_0 X0))) \Rightarrow (m1\_subset\_1 (k3\_robins1 \\ & X0 X1) (u1\_struct\_0 X0)) \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge (l2\_robbins1 X0)) \Rightarrow ((v5\_robbins1 \\ X0) \Leftrightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2. \\ (m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (k3\_robbins1 X0 (k1\_lattices \\ X0 (k3\_robbins1 X0 (k1\_lattices X0 X1 X2)) (k3\_robbins1 X0 (k1\_lattices \\ X0 X1 (k3\_robbins1 X0 X2)))) = X1)))) \end{aligned} \quad (5)$$

Assume the following.

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

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**

$$\forall X0.((\neg v2\_struct\_0 X0) \wedge ((v1\_robbins2 X0) \wedge (l2\_robbins1 \\ X0))) \Rightarrow (v5\_robbins1 X0)$$