

# t3\_robbsins2

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v1\_robbsins2 : \iota \Rightarrow o$  be given. Let  $l2\_robbsins1 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k3\_robbsins1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $l2\_lattices : \iota \Rightarrow o$  be given. Let  $l1\_robbsins1 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v1\_robbsins2 X0) \wedge (l2\_robbsins1 \\
& \quad X0))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2. \\
& \quad (m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3.(m1\_subset\_1 X3 \\
& \quad (u1\_struct\_0 X0)) \Rightarrow (\forall X4.(m1\_subset\_1 X4 (u1\_struct\_0 X0)) \Rightarrow \\
& \quad (\forall X5.(m1\_subset\_1 X5 (u1\_struct\_0 X0)) \Rightarrow (k3\_robbsins1 X0 \\
& \quad (k1\_lattices X0 (k3\_robbsins1 X0 (k1\_lattices X0 X1 X2)) (k3\_robbsins1 \\
& \quad X0 (k1\_lattices X0 (k3\_robbsins1 X0 (k1\_lattices X0 (k3\_robbsins1 \\
& \quad X0 (k1\_lattices X0 X3 X4)) X1)) (k3\_robbsins1 X0 (k1\_lattices X0 ( \\
& \quad k3\_robbsins1 X0 X2) (k3\_robbsins1 X0 (k1\_lattices X0 X2 X5))))))) = \\
& \quad X2))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\forall X0.(l2\_robbsins1 X0) \Rightarrow ((l2\_lattices X0) \wedge (l1\_robbsins1 X0)) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2\_struct\_0 X0) \wedge (l1\_robbsins1 X0)) \wedge (m1\_subset\_1 X1 (u1\_struct\_0 X0))) \Rightarrow (m1\_subset\_1 (k3\_robbsins1 X0 X1) (u1\_struct\_0 X0)) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2\_struct\_0 X0) \wedge (l2\_lattices X0)) \wedge ((m1\_subset\_1 X1 (u1\_struct\_0 X0)) \wedge (m1\_subset\_1 X2 (u1\_struct\_0 X0)))) \Rightarrow (m1\_subset\_1 (k1\_lattices X0 X1 X2) (u1\_struct\_0 X0)) \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0) \wedge (l2\_robbins1 X0)) \Rightarrow ((v1\_robbins2 \\
& \quad X0) \Leftrightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2. \\
& \quad (m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3.(m1\_subset\_1 X3 \\
& \quad (u1\_struct\_0 X0)) \Rightarrow (\forall X4.(m1\_subset\_1 X4 (u1\_struct\_0 X0)) \Rightarrow \\
& \quad (k3\_robbins1 X0 (k1\_lattices X0 (k3\_robbins1 X0 (k1\_lattices X0 \\
& \quad (k3\_robbins1 X0 (k1\_lattices X0 X1 X2)) X3)) (k3\_robbins1 X0 (k1\_lattices \\
& \quad X0 X1 (k3\_robbins1 X0 (k1\_lattices X0 (k3\_robbins1 X0 X3) (k3\_robbins1 \\
& \quad X0 (k1\_lattices X0 X3 X4)))))) = X3))))))
\end{aligned} \tag{5}$$

**Theorem 1**

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