

t3_stacks_1

(TMb61a1roctDtyCL21HXmMwJn5eUGikRdEj)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v11_struct_0 : \iota \Rightarrow o$ be given. Let $l1_stacks_1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u4_struct_0 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v4_stacks_1 : \iota \Rightarrow o$ be given. Let $v5_stacks_1 : \iota \Rightarrow o$ be given. Let $k7_stacks_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_stacks_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_stacks_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 X0) \wedge (l1_stacks_1 \\ & X0))) \Rightarrow ((v5_stacks_1 X0) \Leftrightarrow (\forall X1.(m1_subset_1 X1 (u4_struct_0 \\ & X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (X1 = k5_stacks_1 \\ & X0 (k7_stacks_1 X0 X1 X2)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 X0) \wedge (l1_stacks_1 \\ & X0))) \Rightarrow ((v4_stacks_1 X0) \Leftrightarrow (\forall X1.(m1_subset_1 X1 (u4_struct_0 \\ & X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (X2 = k6_stacks_1 \\ & X0 (k7_stacks_1 X0 X1 X2)))))) \end{aligned} \quad (2)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 X0) \wedge (l1_stacks_1 \\ & X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u4_struct_0 X0)) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 (u4_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 \\ & (u1_struct_0 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow \\ & (((v4_stacks_1 X0) \wedge ((v5_stacks_1 X0) \wedge (k7_stacks_1 X0 X1 X3 = k7_stacks_1 \\ & X0 X2 X4))) \Rightarrow ((X3 = X4) \wedge (X1 = X2))))))) \end{aligned}$$