

t37_stacks_1

(TMY2fRz9twVVRDEcKSc2DztwGiSZywf7SJn)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v11_struct_0 : \iota \Rightarrow o$ be given. Let $v2_stacks_1 : \iota \Rightarrow o$ be given. Let $v3_stacks_1 : \iota \Rightarrow o$ be given. Let $v4_stacks_1 : \iota \Rightarrow o$ be given. Let $v5_stacks_1 : \iota \Rightarrow o$ be given. Let $v6_stacks_1 : \iota \Rightarrow o$ 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 $k14_stacks_1 : \iota \Rightarrow \iota$ be given. Let $r1_stacks_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_stacks_1 : \iota \Rightarrow \iota$ be given. Let $k6_eqrel_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_stacks_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 X0) \wedge ((v2_stacks_1 \\ & X0) \wedge ((v3_stacks_1 X0) \wedge ((v4_stacks_1 X0) \wedge ((v5_stacks_1 X0) \wedge \\ & ((v6_stacks_1 X0) \wedge (l1_stacks_1 X0))))))) \Rightarrow (\forall X1. (m1_subset_1 \\ & X1 (u4_struct_0 X0)) \Rightarrow (\forall X2. (m1_subset_1 X2 (u4_struct_0 \\ & (k14_stacks_1 X0)) \Rightarrow ((X2 = k6_eqrel_1 (u4_struct_0 X0) (u4_struct_0 \\ & X0) (k10_stacks_1 X0) X1) \Rightarrow ((r1_stacks_1 X0 X1) \Leftrightarrow (r1_stacks_1 (\\ & k14_stacks_1 X0) X2)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 X0) \wedge ((v2_stacks_1 \\ & X0) \wedge ((v3_stacks_1 X0) \wedge ((v4_stacks_1 X0) \wedge ((v5_stacks_1 X0) \wedge \\ & ((v6_stacks_1 X0) \wedge (l1_stacks_1 X0))))))) \Rightarrow (\forall X1. (m1_subset_1 \\ & X1 (u4_struct_0 (k14_stacks_1 X0)) \Rightarrow (\exists X2. (m1_subset_1 \\ & X2 (u4_struct_0 X0) \wedge (X1 = k6_eqrel_1 (u4_struct_0 X0) (u4_struct_0 \\ & X0) (k10_stacks_1 X0) X2)))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 X0) \wedge (l1_stacks_1 \\ & X0))) \Rightarrow (\neg (v2_stacks_1 X0) \wedge (\forall X1. (m1_subset_1 X1 (u4_struct_0 \\ & X0)) \Rightarrow (\neg r1_stacks_1 X0 X1))) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 X0) \wedge ((v2_stacks_1 \\ & X0) \wedge ((v3_stacks_1 X0) \wedge ((v4_stacks_1 X0) \wedge ((v5_stacks_1 X0) \wedge \\ & ((v6_stacks_1 X0) \wedge (l1_stacks_1 X0)))))))) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 (u4_struct_0 X0)) \Rightarrow ((r1_stacks_1 X0 X1) \Rightarrow (k6_egrel_1 (u4_struct_0 \\ & X0) (u4_struct_0 X0) (k10_stacks_1 X0) X1 = u1_stacks_1 X0))) \end{aligned} \quad (4)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 X0) \wedge ((v2_stacks_1 \\ & X0) \wedge ((v3_stacks_1 X0) \wedge ((v4_stacks_1 X0) \wedge ((v5_stacks_1 X0) \wedge \\ & ((v6_stacks_1 X0) \wedge (l1_stacks_1 X0)))))))) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 (u4_struct_0 (k14_stacks_1 X0)) \Rightarrow ((r1_stacks_1 (k14_stacks_1 \\ & X0) X1) \Leftrightarrow (X1 = u1_stacks_1 X0))) \end{aligned}$$